This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

Digitized by Google

BOSTON
MEDICAL LIBRARY
8 THE FENWAY

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

TRANSACTIONS

OF THE

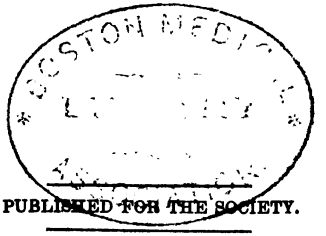
INDIANA STATE MEDICAL SOCIETY

AT ITS

EIGHTEENTH ANNUAL SESSION,

HELD AT

INDIANAPOLIS, MAY 19 AND 20, 1868.



PUBLISHED FOR THE SOCIETY.

INDIANAPOLIS:
J. M. & F. J. MEIKEL & CO., PRINTERS, BOOK BINDERS AND STATIONERS.
1868.

Digitized by Google

CATALOGUED.
G.H.B.
2/8/86.

Digitized by Google

CONTENTS.

PAGE

I. Annual Address of the President—J. S. Bobbs, M. D., Indianapolis 1
II. Pathology of Diphtheria—Jas. F. Hibberd, M. D., Richmond 17
III. Biliary Function—Vierling Kersey, M. D., Richmond 24
IV. Cholera—Geo. Sutton, M. D., Aurora 51
V. Report on Surgery—W. Lomax, M. D., Marion 66
1. Amputation at Shoulder Joint in an old man in the third stage of Consumption—J. F. Hibberd, M. D., Richmond 67
2. Amputation of Thigh for disease of Knee Joint—John Rea, M. D., Newcastle 67
3. Amputation of the Leg for incurable Ulcer—John Rea, M. D., Newcastle 68
4. Lithotomy of the Gall Bladder—J. S. Bobbs, M. D., Indianapolis 68
5. Lacerated Wound extending from labium pudendum to peritorium—J. W. Pugh, M. D., New Cumberland 73
6. Dislocated Testis, operation for Hernia—Thomas S. Baysie, M. D., Spiceland 74
7. Cæsarian Section—H. Case, M. D., Matamoras 74
8. Compound Fracture of Leg—G. W. Burke, M. D., Sulphur Springs 74
9. Fracture of Inferior Maxilla—J. N. Parr, M. D., Joliet 75
10. Cases—Dislocation, Necrosis—Amputation—H. V. Passage, M. D., Peru 76
11. Amputation of Mammary Gland—J. F. Hibberd, M. D., Richmond 76
12. Amputation of Mammary Gland—nine cases—W. Lomax, M. D., Marion 77
13. Amputation of Breast—S. S. Horne, M. D., Jonesboro 83
14. Amputation of Breast—C. Lomax, M. D., Marion 84
15. Amputation of Breast—C. S. Arthur, M. D., Pennville 84
16. Amputation of Breast—John Rea, M. D., Newcastle 84
17. Cases in Army Surgery—Joseph A. Stillwell, M. D., Brownstown 85
18. Cases in Army Surgery—C. S. Arthur, M. D., Pennville 86
19. Gunshot Wound of Knee Joint—H. Strong, M. D., Rockford, Ill 86
20. Ligature of Brachial Artery—I. T. Cann, M. D., Evansville 87
21. Gunshot Wound of Lung—I. T. Cann, M. D., Evansville 87
22. Resection of Upper Extremity of Humerus—two cases—D. W. Voyles, M. D., New Albany 88
VI. Diseases of Females—Theophilus Parvin, M. D., Indianapolis 90
VII. Placenta Prævia—G. W. Mears, M. D., Indianapolis 100
VIII. Indiana's Idiotic Children—H. P. Ayres, M. D., Fort Wayne 106
IX. Cholera—N. Field, Jeffersonville 114
X. Cerebro-Spinal Meningitis—Prize Essay—J. R. Weist, M. D., Richmond 121
XI. Transactions of Eighteenth Annual Meeting 149

Digitized by Google

Digitized by Google

OFFICERS.

PRESIDENT.

NATHANIEL FIELD, M. D., Jeffersonville.

VICE PRESIDENT.

R. N. TODD, M. D., Indianapolis.

SECRETARY.

G. V. WOOLEN, M. D., Indianapolis.

ASSISTANT SECRETARY.

W. J. ELSTUN, M. D., Indianapolis.

TREASURER.

W. B. LYONS, M. D., Huntington.

LIBRARIAN.

WM. WANDS, M. D., Indianapolis.

Digitized by Google

Digitized by Google

BOSTON MEDICAL LIBRARY ASSOCIATION

PRESIDENT'S ADDRESS.

THE ORIGIN, OBJECTS AND PROGRESS

OF THE

INDIANA STATE MEDICAL SOCIETY.

BY J. S. BOBBS, M. D., INDIANAPOLIS.

GENTLEMEN: In pursuance of the custom established by my worthy predecessors, I appear before you, but crave your indulgence toward the remarks I have to offer.

Nineteen years ago, the physicians of Indianapolis were organized into a compact and efficient body, working under the name of the Indianapolis Medical Society. A proposition was introduced at one of their meetings to initiate steps for the establishment of a State Medical Society. After due consideration the subject was approved, and a call issued through the newspapers to other similar societies, and to the physicians of the State, requesting all those favoring the object to convene or be represented, at Indianapolis on the 6th of June, 1849. Correspondence was also had with prominent members in the profession, urging their approval and co-operation in the project.

At ten o'clock on the day designated, a respectable number of gentlemen were gathered at Wesley Chapel, in this city, and organized by calling the late Dr. John H. Sanders, of the city of Indianapolis, to the chair, preparatory to a permanent organization of a convention.

A committee, appointed for that purpose, reported the names of Livingston Dunlop, late of this city, as President, and Dr. N. Johnson, of Cambridge City; Dr. F. Ryan, of Anderson; Dr. J. W. Florer, of Montgomery county: and Dr. C. Wallace, of Hendricks county, as Vice Presidents, for permanent officers of the convention. The report was adopted.

A committee was also appointed to prepare business for the consideration

Digitized by Google

of the convention, and which made the following report at an adjourned meeting:

"First—That they deem it expedient that the convention take proper steps to organize a State Medical Society in Indiana, and that a committee be appointed to report a Constitution and By-Laws for that purpose.

"Second—That a committee be appointed to consider the expediency of establishing a Medical Journal, to be the proper organ of the profession in this State.

"Third—That the convention recommend, in some suitable way, to members of the profession throughout the State, their organization into local or district societies, as may be most convenient to them.

"Fourth—That a committee be appointed to draft such resolutions as may deserve the consideration of the convention.

"Fifth—That a committee be appointed to publish the proceedings of the convention in pamphlet form."

The report, after discussion, was adopted.

So far as I am informed, nine of the twenty-eight physicians who participated in the proceedings of this convention are numbered with the dead. Their records and their memories are all that remain to us. Their voices are silent, but their counsel is present. It is embraced in the second article of the Constitution of the State Medical Society, adopted by the convention, in the following words:

"Sect. 1. The Society shall constantly have in view—

"First—The association of the profession, for the purpose of mutual recognition and fellowship.

"Second—The maintenance of union, harmony, and good government among its members, thereby promoting the interests, honor, and usefulness of the profession.

"Third—The cultivation and adornment of Medical Science and literature, and the elevation of the standard of professional education."

These are noble and worthy objects; wise and generous aims. Our present Constitution amplifies on them, if it fails to improve them.

Measured by this standard, has the society succeeded? Have the ends here presented been approximated by the members? And if they have, has the Society been the agency through which this has been effected?

Before we answer these questions more in detail, it may complete this history to add that, having adopted a Constitution and By-Laws, the members proceeded to elect the first officers of the Indiana State Medical Society, which resulted in constituting Dr. T. W. S. Cornett, of Ripley county, President, and Dr. A. Clapp, of New Albany; Dr. N. Johnson, of Cambridge; Dr. Dunlap, of Indianapolis, and Dr. Farquehar, of Wabash, Vice Presidents for the ensuing year. Dr. Cornett accepted, and presided at the first session of the Society, held in this city, in May, 1850, inaugurating his presi-

Digitized by Google

dency with an able, discriminative, and learned address, on the "Rise, Progress, Present State, and Future Prospects of Medical Science."

A motion for the final adjournment of the convention pending, the President—the pioneer of the profession in central Indiana, whose life was an exemplification of the dignity, the courtesy, and the integrity that characterizes the true physician—before putting the question, embraced the occasion to express his gratification at the harmonious action which had characterized the proceedings while acting as a convention and a Society, and said he cherished a hope that this was the commencement of a more vigorous organization of the profession, and that the proceedings of the present convention would tend to strengthen the bonds of union amongst medical men, and result in great good to the profession in the State. The Society adjourned to Washington Hall, where it resumed its sittings, around a profusely spread table, and about ten o'clock, P. M., separated, with many expressions of gratification at the pleasure derived from this meeting, and the prospect of its annual recurrence. To those who participated in these proceedings, and recollect the others who co-operated, this retrospect will not be impertinent.

In reciting the objects of the Society, the first in the order named is "The association of the profession for the purpose of mutual recognition and fellowship."

If the success of the Society has not been completely satisfactory in this particular, it has, at least, achieved a large measure of benefits. Up to that period, the oldest and most distinguished physicians of the State were generally strangers to each other, and rarely met, except in some casual manner, separating again without any significance beyond that which springs from the transient association of persons of diverse callings, brought together by fortuitous circumstances. Hardly a member of the profession enjoyed a reputation among his brethren, much less among other citizens, beyond the precincts of his personal labors. Professional recognition and fellowship among physicians were limited to those resident in isolated towns and neighborhoods, brought into relationship in the discharge of their daily avocations. Local Societies were in existence in several portions of the State, but these embraced but a meagre portion of the profession, and were unappreciated, if not wholly unknown, outside of the narrow circles that respectively circumscribed them. Each physician, seeing himself a unit, felt himself divested of all connection with others engaged in the same calling, beyond the boundaries of his own practice. And the practitioner, thus circumscribed in his associations, with no outlook that reveals any object of professional interest, beyond his immediate horizon, is prone to find his early aspirations progressively die out, his love of science give place to mere art, and his art degenerate into routine; when he makes his diurnal circuit like the hands of the town clock, uninfluenced by times, seasons, or circumstances. All Indiana physicians did not reach this state of perfection, but the general lack of mutual recognition and fellowship prevailing among them, tended to bring them all into the highway which leads to this consummation. If any escaped, it was

Digitized by Google

through some favorable accident, and instances were more exceptional than general in their occurrence.

And the evil consequences of this condition of the profession were not limited to these results, but extended to its social and political interests. Each physician exerted what individual influence belonged to his position and worth over the narrow district that bounded his labors. But he lacked the lever of co-operation to move the mass of public indifference always ready to settle down upon, and shroud from public recognition, the worthiest citizen, left isolated and without the power to assert his personal rights in the community. The drudge of all classes, each used him when he listed; the lawyer for his client; the preacher for his services; the politician for his vote; the merchant for his patronage; the mechanic for his custom; the farmer from necessity; and all held him under obligations for accepting his services. That this was true of all physicians in Indiana twenty years ago I do not mean to assert; that it was true of a majority of them I fully believe. And this arose, less from the lack of ability and disposition to assert their personality, than from the absence of that association and fellowship of the members of the profession, which indicates community of feeling, reveals identity of interests, and leads to co-operation of effort for the achievement of mutual advantages. Hence it was wisely provided by the convention which inaugurated the Indiana State Medical Society, that the Society "should constantly have in view the association of the profession for the purpose of mutual recognition and fellowship."

But have these things changed for the better since the organization of this Society? I am of the opinion they have, and that the change is traceable to the influence of the Society in a large degree. Although the ardor with which the Society has cherished its existence has waxed and waned during these score of years, at no time did it entirely die out; and it seems to glow at present as brightly as during any period of its existence. Many, very many, whose honored names adorn the roll of membership, are not present with us to-day. Some, because their labors are ended, and time shall know them no more forever. It were invidious to name any of them, unless we could include all. But their memories are the more pleasant, since they are evoked through the recollections that cluster around those annual gatherings, had for mutual recognition and fellowship. Others are missing from casual or overruling circumstances, and if not sharing our deliberations, are yet a valuable part of our body; cementing it with the history of the past, as the younger and more favored portion will bear it onward to the future; and gradually is the channel widening and deepening, whose first rills began to flow nineteen years ago, as it gathers its waters into a common stream, and aims to clasp the whole profession in its ample bed. And whether absent or present, whether veterans or recruits in the service of the profession, instead of each standing alone, claiming no kindred with his brethren, from every city, town and neighborhood in the State, come up their voices, all craving mutual recognition and fellowship among their fellow craftsmen. Local Societies are springing up in various quarters, where none existed before, and

Digitized by Google

it is believed those of older date, in a majority of instances, are enlarging their boundaries and extending their influence. And the fellowship among the members has fostered a desire to vindicate the dignity and influence of the profession. Self respect is enhanced in the knowledge that we have the means to enforce, as well as the right to claim, the respect and consideration due the members of a learned and liberal profession from an enlightened community. Much remains to be done to place us abreast of some of the other professions in this particular, but the unity of purpose and persistence of effort, essential to success, are being developed through the transactions of the Society. We have not the right to assert a claim to which we are not fairly entitled. Our standard of qualifications must command the approval of the profession, if we exact the respect of the community to its recognized members. This Society has enacted such a standard for its members, and can fairly demand the appreciation justly due its ability and worth.

Contrasting the present condition of the profession with that existing prior to the organization of the State Medical Society in Indiana, every observant physician must admit it to be vastly more reputable and influential than before a concerted effort was made to initiate and perpetuate a system of mutual recognition and fellowship among its members.

The second object which the State Medical Society, in its origin, required to be kept constantly in view, is: "The maintenance of union, harmony and good government among its members, thereby promoting the interests, honor and usefulness of the profession."

To reach this requirement, the convention adopted the highest standard of morality ever erected for the instruction and government of the profession in the United States, by unanimously adopting the resolution, "That the convention adopt the National Code of Ethics, and that we recommend its adoption to the various County and District Medical Associations as their standard for professional intercourse."

It may suggest itself that this high standard has not always been maintained among the members of the Society, and still less by physicians outside of it, in the regulation of their professional intercourse in this State. That in no wise detracts from the credit due the gentlemen who gave their sanction to the pure ethics, embodied in the National Code, with a knowledge that many physicians held some of its requirements unnecessarily restrictive. But union, harmony and good government among the members of the profession were paramount considerations, and no rules or regulations were held to be too rigid, when their purpose and tendency were to maintain these ends. And if the Society has sometimes failed to enforce these enactments, their records attest that their violation has not always been with impunity. But whether these regulations have been strictly observed in all cases or not, the pervading and predominant sentiment of the members recognise their obligatory force, and they habitually conform to them in their professional conduct, "thereby promoting the interests, honor and usefulness of the profession."

Without union there can be no harmony in the profession, and without

Digitized by Google

both union and harmony there can be no good government among its members; and without the latter, when each is a law unto himself, no degree of excellence or worth, ability or learning, in personal instances, can plant the body of the profession on the elevated plane it should occupy. The interests, the honor and the usefulness of the profession is the joint property of its reputable members, but it must also be the product of their joint labors; and all individual effort—the highest attainment in individual qualifications—will fail of its legitimate influence, when it is attempted to be experienced, while divorced from the body of the profession.

That the Society has exerted a beneficent influence with the profession, in promoting union and harmony among its members, is manifest from the wide-spread interest taken in its proceedings. Twenty-eight members were all that could be induced to participate in the first attempts to bring the profession into a State organization, so essential to enable it to execute its legitimate influence in the community, and only nine of this number resided outside of Marion county. What the present number in attendance may be I can not state, nor is this necessary to establish the unquestioned admission that great good has enured to the profession by the transactions of this Society. During the nineteen years of its existence, a large proportion of the talent and ability engaged in the practice of the profession, during that period, have either participated in its proceedings, or otherwise indicated their approval of its objects; and from a number not equal to some of the local societies of the State, its membership has grown to be the conceded representation of the whole profession. And in thus bringing the profession into such an organization as to have already secured the confidence and respect of the physicians of the State, it offers an approved means of bringing a majority, if not all of them, to a maintenance of union, harmony and good government among themselves, thereby promoting the interests, honor and usefulness of the profession.

The third object proposed by the Society is, "The cultivation and advancement of medical science, and the elevation of the standard of professional education."

That the success of the Society has been less, in carrying out this object, than in the preceding ones, must be admitted. This has, however, been less chargeable to want of zeal in the members, than to the impracticable nature of the subject. While all admit the desirableness of such a consummation, diversity of opinion exists as to its feasibility, or the best mode of achieving the ends proposed. The Society will recollect the emphatic presentation given this subject by my able predecessor, Dr. Kersey, in his annual address, and the energetic responses which it provoked on the part of some members. That the convention looked to the establishment of a Medical Journal, and that of a Medical College, as the chief means toward executing the purposes set forth in this article of the Constitution of the State Medical Society, I believe to be a fact, though not apparent from its proceedings. The subject of a Medical College was not considered, but a committee was appointed to report on "the expediency of establishing a Medical Journal, to be the

Digitized by Google

proper organ of the profession in this State." Curiously enough, Dr. Kersey was chairman of the committee, the other two members being Drs. Mears and Curran. The committee, through Dr. Curran, made a favorable report, but whether it had the concurrence of the chairman in committee, does not appear from the proceedings. As the report is not long, and seems to present the subject in as favorable a manner as the friends of the project have hitherto done, I will transcribe it:

"The want of a proper medium of communication amongst the members of the medical profession has been sensibly felt by every intelligent physician in the State for a long time, for the diffusion of sound medical intelligence is one of the first and highest aims of every educated medical man. For the accomplishment of this desirable object, we have possessed no adequate means up to this time, and to supply the defect we should endeavor to make speedy provision. Nor can we, in the opinion of your committee, serve our profession and country better than by adopting measures immediately to remedy this defect.

"A vast amount of medical knowledge remains in the hands of the experienced and skillful physicians throughout the land, useful to themselves indeed, but hidden from their brethren, to whom they are ready to impart it but which can not be done for the want of a ready means of communication.

"Every State, county and township has its medical facts and statistics, the aggregate of which constitute and make up the medical knowledge and science of the country. Now, when every section of Indiana shall contribute its proper quota of experience and facts, through its intelligent and observing medical men, we shall find ourselves in possession of a large amount of medical literature valuable beyond all computation.

"If our medical brethren throughout the length and breadth of the State, will consent to communicate the result of their observations freely, we feel assured that a journal of a very high order of usefulness can be sustained, which will prove not only a medium of intelligence, but also a bond of union amongst medical practitioners.

"Impressed by the belief that such will be the results, we would respectfully recommend the establishment of a journal immediately."

No further action was taken on this report. That the chairman of the committee had a small show in getting it up, is obvious from both the matter and the manner of it, and I infer that he cherished views on this subject then, similar to those enunciated in his address. The remarkable contrast those present with those entertained by a majority of the committee, can not be fully appreciated unless given in the trenchant manner of their author, who initiates the subject thus:

"We are without a Medical Journal in this State—a fact we probably have no reason to regret. State lines in America, national boundaries and broad oceans on earth, are getting to signify little in the way of restraints in the diffusion of literature, and there is reason to believe this little will become less and less, for an indefinite period to come. When men go into market for intelligence, as for other commodities, they should forego sec-

Digitized by Google

tional prejudices, and get precisely what they need. This rule applies with special force to medical intelligence. Bad medical literature should never be exposed to sale in any market; but if men will place it in market, there is no sufficient reason why it should be purchased."

* * * * * * * * * *

"A call for original communications in support of a State Medical Journal would, doubtless, stimulate production, and secure a liberal supply, and there is little reason to question that this supply would, in the aggregate, be sufficiently original; but that it would contribute largely to the stock of positive medical knowledge there seems to be good reason to doubt. But this is precisely the kind of medical literature that we want. We have in the profession already writers enough, and to spare—smooth and scholarly—engaged in weaving, indiscriminately, the apochryphal with the reliable—the mythical with the real—evincing sufficient lack of judgment in the selecting, and of industry in the verification of these facts. Let us not, then, take measures likely to stimulate enterprize in this branch of industry by getting up a local Medical Journal that we do not really need. Rather let us preserve correct notes of such valuable facts as fall within our reach, place them in common stock for preservation and classification, resting assured that they will ultimately find publicity equal to their worth in existing Medical Journals of established value."

This gives but a portion of the severe criticism this subject received at the hands of the President, and is quoted with the view of showing the animus, as well as the merits of the presentation made on the subject.

It is noteworthy, as exhibiting the predominant sentiment of the Society, that this flagrant arraignment of the enterprize of establishing a Medical Journal was met with prompt and energetic protests from sundry members, who appoved the undertaking as tending to advance the interests of the profession, and to ultimately lead to the establishment of a medical college.

The subject is one bearing so directly upon "the cultivation and advancement of medical science and literature, and the elevation of the standard of professional education," that it should be fairly adjudicated, that the decision may command the approval of the Society.

The published transactions of the Society are, perhaps, the fairest exponent of the ability of the profession in the State to promote the cultivation and advancement of medical science and literature. The President seems to regard them in that light, for he characterizes them in his address as such, "that it would be difficult, in any other market, to find a like amount (and this is small in the extreme) of medical literature of so little intrinsic value." Without raising the question of the justice of this opinion, as applied to the aggregate of these, as published, there are unquestionable evidences presented in many articles embodied in them, that their authors have the ability and qualifications requisite to impart intrinsic value to their utterances on medical subjects. That our annals afford too much "bad medical literature," is, unfortunately, true; that they are wholly of that character, however, is not averred. And that the labor bestowed upon many articles

Digitized by Google

contained in the proceedings of the Society would never have been done, in the absence of the inducement held out therein, must be admitted; and many valuable grains of wheat have thus been garnered, albeit, along with bountiful harvests of straw. It may be a costly mode of production, but its value does not wholly consist in its financial worth. Domestic manufacture is not only essential to the establishment of a medical literature commensurate with the wants of the profession, but is the readiest means of reducing its cost. What is now often regarded as a luxury, may become domesticated into a necessity, when its general use among the profession would lead to an improvement in its quality.

It is averred that "we are already supplied with more periodicals than we can afford to read, though gratuitously placed upon our tables. Were the profession what it should be, it is obvious only first class journals could subsist. In that case, perhaps, half the present number would perish during the current year." But it may be said, in answer to this, that the profession is not "what it should be," and therefore this assumption does not apply.

Traveling in a car, some years ago, with a prominent editor and politician of this State, now deceased, I observed him perusing a newspaper published in one of the rural districts. Throwing it aside with evident marks of disgust, when through with it, he remarked, impatiently, "it would make a man ignorant to read such a paper." Take those accustomed to an elevated standard of excellence in a periodical devoted to any special department of science or literature, and it would be placing them in coventry to compel them to habitually read those rude attempts at imitation that frequently characterize provincial journalism. Yet, if this were to lead to the exclusion of this species of literature, the alternative would be—not a substitution of the high standard achieved by the metropolitan press, although this might contain precisely what the people needed—but an almost total lack of any literature on any subject. And with this lack would grow up that blissful state of mental vacuity which could conceive no sufficient reason for the existence of an Alexandrian library.

I fear it is a fact, that if our highest standard of medical literature were the only kind admissible, that not only would it fail to be found on the tables of a large majority of practitioners, but that, in many instances, its most elaborate productions would fail to instruct, because not fully understood.

Perfection in the practice of a physician implies science reduced to art; but many of us are under the necessity of mastering but a modicum of the former, or relinquishing our calling. All can not command the facilities necessary to reach the highest standard of qualifications in the profession, conceding we have the capacity to acquire them. And to impose restrictions upon the profession beyond the reach of a large majority of those engaged in its active duties, would either be useless, because impracticable, or lead to the confounding of a large number of fair practical physicians—limited in their attainments, but honest in their endeavors—with the hosts of audacious quacks, lying in wait to pluck the public.

Digitized by Google

There are, besides, local subjects of interest to the profession, which can be best considered and fairly presented through a home journal. Some of these are of general interest, and deserve to be thoroughly canvassed. For instance one is the legal status of the profession in this State. In his annual address, the first President of this Society remarks, at its close: "What are our prospects for the future? This is an interrogatory which I know not how to answer; but if we are to judge the future by the past, we may suppose that the Congress of the United States will continue to aid quackery as heretofore, by granting patents to venders of secret nostrums, and that publishers of newspapers will, for the money, continue to place the lying advertisements of these men before their readers. The wondering part of mankind, who are always in pursuit of miracles in medicine, will continue, as heretofore, as one humbug expires, to fix their faith on the one which arises from its ashes, and thus manage to live in hope, let the end be what it may. The Legislature of the State will continue, as now, to prevent, as far as possible, the study of the structure of the human body, and the prejudices of the people will be a barrier to pathological investigations, whilst the practitioner is held liable in damages for the consequences of his ignorance, in defiance of the legal maxim which says that that which is not reason is not law.

"In the eye of the law your money is of more value than your life, for the lawyer is not allowed to attend to your pecuniary interests in a court of justice without first being examined and licensed, whilst he who deals with your life, on a bed of sickness, is required to furnish no proof whatever of his qualifications for the duty."

That argument is as justly applicable to-day as when uttered, eighteen years ago, so far as it refers to the State of Indiana, and demonstrates pusillanimity on the part of the profession, as well as lack of intelligence in the community. While arrogant ignorance has promptly rejected or contemptuously neglected every measure tending to a legislative recognition of the profession, the latter have received the treatment with a meekness that becomes the culprit, instead of the protest which the assumption demands. Spurned from the halls of legislature, should we assume the grave responsibilities of an expert whenever requisition is made upon us? Until we are conceded a place in our statutes, outside of the penal code, there would seem to be small inducements for us to exhibit before a jury. The State can not take private property for public use, without compensation to the owner. Medical knowledge is private property. Its gratuitous tender to the public as often brings contempt as gratitude to the doner. If it has intrinsic worth, it should receive commensurate compensation when demanded. If it is worthless, the proprietor had better reserve it.

Why should the profession hold itself as a convenience to the public, ready to dispense its choicest acquisitions in its behalf, although driven from the State to provide them? Has the State the moral sight to demand the fruits we gather in other communities, through means she pronounces criminal at home? If charlatanry is competent to dispense at the bedside of the sick, why not also at the bar of the court? If our counsel is scouted in forming

Digitized by Google

the laws, why not dispense with our opinions in administering them? If the clown can sit in judgment on the qualifications of the educated physician, does duty require that the latter should reciprocate? These questions relate to domestic subjects, pertinent to the daily experiences of Indiana physicians. Their thorough discussion could hardly fail to enlarge our own views of professional obligations to the public, as well as those of the latter to the profession. But this is practicable, to any useful extent, only in a home journal.

While we can fully indorse the views of the President's address, that there should be no bad medical literature, and that State boundaries should not be regarded in our efforts to secure the best in the market, it seems to me the foregoing considerations should not be excluded, in aiming to arrive at the best mode for the cultivation and advancement of medical science and literature. These avowed objects are stated, without qualification, in the Constitution of the Society, but the best method of achieving them may not be the same in all situations. We are little accustomed to authorship, and our crude productions may have little intrinsic value, and fail to secure a market beyond our own borders; still, they may meet a requirement which foreign journals might fail to supply, and foster in us a desire for the stronger meats dispensed to the profession in other quarters better provided.

Many physicians doubt the expediency of seeking a legal standing for the profession, and prefer to rest its claims for public consideration upon its private and intrinsic worth. Admit this view to be correct, there remain important interests of the profession which should receive the strong arm of the law in their support. Why may we not demand such facilities in the prosecution of our investigations as all highly civilized and enlightened States concede to their citizens for this purpose? Let the State erect any standard of qualifications for the practitioner which its legislative wisdom may decide expedient, and then remove all unnecessary obstacles in the way of attaining these. But if she refuses to do this, and continues to pander to popular prejudices, against the approved methods of medical teaching, we believe it to be the right, if not the duty, of the profession to hold itself aloof on all suitable occasions, from meeting the exactions often imposed by judicial inquiries.

Closely allied to a Medical Journal, as a means for "the cultivation and advancement of medical science and literature, and the elevation of the standard of professional education," is the subject of a Medical College. In considering it in this connection, we must again refer to the address of our late President, whose terseness of language is only equalled by the emphasis of his opinions on this subject. He remarks:

"We are without a Medical School in this State—a fact to be seen only in the light of rare good fortune. Not that Medical Schools are to be regarded with aversion. Far otherwise. * * * * * *

"But what do we want with a Medical School in Indiana? Surely nothing, unless it be established on a scale and basis to compete in excellence, in eminence, in every appliance and means of instruction, with the very best schools of the age. It should assume, at once, a high rank among our positive luxuries, for it could not possibly be regarded in the light of a necessary

Digitized by Google

institution. It should be richly endowed, placing it quite beyond the influence of pecuniary considerations, and thus commanding teachers of the first order—vigilant guardians of professional character—providing against unworthy membership by enrolling only those of unquestionable fitness, and conferring degrees on merit only. Such an institution will be welcome whenever it comes."

We have no doubt of it. Such luxuries are like angels' visits, and can not fail of appreciative recognition whenever they appear without disguise.

But it suggests the consideration: When this professional millenium may be reasonably looked for? Whose cry in the wilderness will herald its advent? Has that Simeon left his mother's lap, who, in his honored age, shall breathe his last prayer in acknowledgement of the full fruition of its consummation? These are questions which the history of the institutions of other States fail to illustrate, because they offer no example.

My knowledge of the origin of Medical Colleges does not extend to many of those in operation. So far as it does, however, it embraces but one whose history conforms to this begetting, and in that one, the luxury is not restricted to the medical profession, but includes the homœopathic profession, in its vigilant guardianship of professional character.

Success in teaching the science of medicine demands the same conditions that ensure success in the practice. Pecuniary recompense is among these. But this must be guaged by the industry and ability put forth by the teacher, and that method is best which offers the strongest inducements for their exercise. Divorced from these motives, the strongest stimulus to individual effort will be wanting, and a relaxation of purpose the result.

We can recall the origin and progress of no Medical College which has exhibited more success than that of the Jefferson Medical College of Philadelphia. Its establishment was a purely private enterprise, without endowment, and exclusively dependent upon the energy and ability of the faculty who originated it. They laid its foundations and reared its walls in the shadow of the most distinguished medical school in the United States, the University of Pennsylvania, a nursling of the Commonwealth from its inception, and a pensioner since its maturity. Notwithstanding these adverse circumstances, the projectors of the Jefferson School made it, during successive years—not by a single effort—"a basis to compete, in excellence, in eminence, in every appliance and means of instruction, with the very best schools of the age."

That a Medical College will ever be established in this State on the independent basis, and with the wealth of appliances required by this standard, is possible—how long it will precede the general resurrection, is problematical. The man is given to the indulgence of a lively faith who cherishes the hope of its early realization.

I can not resist the conviction that a good Medical School and Medical Journal in Indiana would tend to the cultivation of medical science and literature among the profession, even if they failed to exhibit the characters demanded in these exacting terms. I feel inclined to go a step further, and

Digitized by Google

venture the opinion that their influence would be more widely felt, and beneficently exerted, if they aspired to a less exalted position at their inauguration. There is a fitness of things which can not be safely disregarded in the practical affairs of life. It seems to me it requires, in this case, that while we demand a higher standard of qualification in the student, we should couple it with the means of obtaining that platform; and that it will better subserve the interests of the profession and the people to elevate the great body of the former to a creditable position, than to attempt to confer eminence on a few and nothing on the others.

I venture these suggestions with diffidence, when they conflict with the opinions of abler brethren, who have addressed us on this subject. The American Medical Association has made the pupilage of the student in our Medical Colleges a frequent subject of deliberation, and recommend an extension of the term from three to four years, and of the course of lectures from four to six months, and some judicious changes in the present mode of instruction. To those who can avail themselves of these advantages, if fully adopted, the result must be a more satisfactory training of their faculties for the peculiar duties of their profession. To that large class who have to work their way before the mast, it offers small inducements to avail themselves of it, and will be more likely to prolong the present practice of deferring the completion of their education until long after they enter upon the practice of the profession.

It does not answer to say that those not thoroughly prepared by previous education, and the means of pursuing their studies in the most eligible institutions, until well prepared to enter upon the practice, should be recognised by the regular profession. We must accept facts as they exist, and take a feasible mode of changing them, if we are to succeed in any reasonable period of time. The vital fact is, that too many physicians enter the practice after too little preparation, and the only way to correct this is to make it disreputable, by rendering it less common.

The proposition, that we should place sentinels at the outer portals of our sanctuary, and guard it from the entrance of any but the worthy and well qualified, would commend itself to all, if its adoption were as practicable as expedient. A more thorough scrutiny into the qualifications of the applicants, than the present practice exacts, would exclude numbers that now find easy admission; and a more systematic course of office instruction would give a broader basis for commencing the elaborate training of those to be received, and both steps would tend to bring the latter nearer that state of regeneration which we deem befitting the aspirants craving admission to the inner temple. But in restricting the priesthood to the tribe of Levi, we only provide for the wants of a sect, and not for those of the community at large.

Prof. Gross holds this estimate of the value of office instruction, in his report on Medical Education, made to the American Medical Association, in 1867:

"The office of a private preceptor is no place for disciplining the mind of a medical student, unprovided, as it generally is, with the requisites for car-

Digitized by Google

rying on a systematic course of studies. What progress can a student make without books, apparatus, clinical resources, and frequent oral examinations and explanations."

If these utterances be correct, judging from my experience, it were an easier task to provide public institutions, in which these advantages might be afforded the student, than to secure them through a reformation in the present manner of private pupilage. If it be a fact that only through a systematic course of office instruction, can an adequate measure of qualifications be attained by the student, I fear he must continue, as at present, to grope his way into the profession, instead of traveling over an illuminated pathway.

But whether we concur or differ in opinion as to the means best calculated to secure the ends contemplated in the creation of the State Medical Society, these objects are as essential to the advancement and consolidation of the interests of the profession now, as they were at its origin. Whether it were wiser to prolong our minority, and defer the full possession of our inheritance until we shall have reached a riper maturity; or, on the other hand, to assert our claims to manhood at once, and the full exercise of all the functions of independent existence, may receive diverse conclusions from different members. If I differ from some of my most esteemed conferes on some of these mooted questions, it is because I believe the interests of two million of people demand a larger provision of the appliances necessary to the acquisition of a liberal medical education to the three thousand physicians whose daily ministrations they require; because I believe nothing will tend more to elevate the character and enlarge the usefulness of the profession than the domestication of respectable educational and periodical agencies, exclusively devoted to the promotion of medical science and literature, and nurtured as the offspring of our loins; and because I believe no such agencies will ever become naturalized and identified with the profession of the State, without their cooperation in their creation.

But I will desist. If I have appeared in the role of an advocate, you, gentlemen, are the jury, and will only accept my statements at their worth. Long identified with the profession in Indiana, I hold a jointure in her character and standing, both at home and abroad. No earthly object shares more of my regard, and to no other have I consecrated so large a portion of my life. But the future has so little to provoke my aspirations, I feel that though my opinions are of little value, they are, in no degree, influenced by private ends. To those in the flush of youth and vigor belong the arduous labor of planting the profession on a higher level in Indiana. They enter upon this enterprise under auspices more favorable than those enjoyed by the older members. Whatever be the chosen means, may their efforts reflect luster upon the profession, and honor upon themselves.

Digitized by Google

At the close of the reading, the following remarks were made.

Dr. V. Kersey:

I believe that I have at no time, since my connection with the Society, listened to anything in the way of an address that gave me more pleasure than did this one, just delivered by Dr. Bobbs. From the first page to the last, it seemed to grow more interesting. As an honest, clear and terse expression of individual opinion, it has certainly not been excelled. It is the expression of one of the most thorough students of the profession, eager to advance its interests, and jealous of measures of doubtful propriety, the adoption of which might affect unfavorably its welfare. I feel confident that the President expresses the sentiment of his heart when he tells us, that in whatever he has said or done, he has not acted through selfish motives, that he has no private interests to promote. He has, by many years, passed that period in life when ambition presents her most tempting baits. Although he differs from me in many opinions, I could not have been more pleased could I have been instrumental in modifying the expressions given. I should like to see every one display the same candor, the same open individuality, that is evinced in this production. Let every one give free expression to opinion, when a collected judgment has been reached. Let unity and harmony prevail, and then shall the Society be indeed a means of doing good to the profession and to humanity.

Dr. H. P. Ayres:

When I add to the ability exhibited in the address of our worthy President, that displayed in eulogy by my friend, Dr. Kersey, I find that there is little if any ground left for me to occupy. I, too, can say, that from first to last the remarks of the President possessed to me a peculiar and engaging interest. It was particularly pleasant to me to follow him through that interesting recital of historical facts, connected with the formation and early history of the organization down to the present time. There was a pleasure, but one not unmixed with sadness, in going back to the years past and recalling the faces and memories of those who labored with us, many of whom have gone to their account. The organization formed by fifteen or sixteen men, in days when the convenience of railroad travel were not known, has grown and prospered, until now it numbers over one hundred, annually present, devoted to the work of placing the medical among the foremost in the rank of professions, and as devotedly striving to ameliorate the condition of suffering humanity.

Dr. Joel Pennington:

It is, perhaps, superfluous for me to add my experience to what has been said, but as the address recalled my early recollections of the Society, I can not refrain from saying a few words. I became a member at, I think, the second meeting. I traveled in stage and on horseback then, to meet with the

Digitized by Google

Society, and I distinctly remember the difficulties and hardships of the journey. I remember, too, how elevated I felt when I became a member of the State Medical Society. I felt almost as proud as when I received my medical diploma. I met with the Society at New Albany, Lafayette, Madison, and, days since, I believe at Indianapolis. I have a very distinct recollection of the gratification felt by members then in coming together once a year. The reunion was not only an improving one, but, in a social point of view, decidedly delightful.

Dr. Wm. Lomax and others made interesting remarks, and consumed the balance of the evening in relating their experiences, when the Society was yet in its infancy.

Digitized by Google

REPORT OF THE COMMITTEE

ON THE

PATHOLOGY OF DIPHTHERIA.

BY JAMES F. HIBBERD, M. D., RICHMOND, IND.

Your Committee might begin and end the report on the Pathology of Diphtheria with a single sentence, and that a short one, viz: Diphtheria has no known pathology.

A narration of the various phenomena that present themselves in the progress of the disease is the nearest approach that can be made to a distinct pathology of diphtheria; but as these phenomena are familiar to all practitioners, it were a waste of time to rehearse them here. Under these circumstances, it may be pardoned to your committee, if it present some views in relation to the general principles of pathology, which your committee thinks should underlie the special pathology of diphtheria, as well as that of other diseases.

Let us regard a human system as it stands, composed of apparatuses, organs, tissues, proximate principles, and "vital unities." As we see this complete body it is constantly active; the blood rushing through its containing vessels in a continual round, receiving nutritious materials into its substance and distributing them to the various parts, to each according to its demands, taking up the effete material wherever it is found, and carrying it to its appropriate emunctory; the respiratory apparatus, unceasing in its work of causing influx and eflux of atmospheric air; the secreting glands, in a kind of irregular perpetual motion; molecular change in every tissue working its endless purpose; and all these, with the ordinary voluntary motions combined, constituting life.

From this view, the first step in advance is to separate the idea of structure from the idea of activity. It is quite true that we know nothing of living structure dissociated from activity; we fully recognize that every vital structure has attained its existing conditoin through its own activity, and only by the same force shall it proceed to any advanced condition. Nevertheless it is possible for us to conceive this structure in a state of rest, theoreti-

Digitized by Google

cally; to regard it perfect anatomically and histologically, but physiologically, *nil.* It may be likened to a watch not running—its wheels and pinions all ready for action, but it needs the tension of its mainspring to set them in motion; this applied, it runs until the power which propels it is exhausted. So of our bodies, they are not active by virtue of their organization directly, but have a capability of activity when the proper force is applied. In the watch, the force required was the tension of the mainspring; in the human body the force required is different at various periods of life, is different for the various organs, and even in the same organ is not always the same. In the watch, the tension of the mainspring is renewed at short intervals by winding it up; in the human body, the vital processes continually furnish the force necessary to maintain its own activity, and it often occurs that the activity of one organ produces the excitant of force for another organ, and through the mysterious agency of the nervous system, a force impinging at one point shall excite activity in another, and perhaps remote point.

This is, perhaps, sufficient to render the idea presented comprehensible. Now let us designate this thing that excites activity, whatever it may be, and from wherever derived, by the general term *stimulant*, and this shall apply not only to the body as a whole, and its phenomena called life, but to each individual cell or vital unity. Our present knowledge is too limited to enable us to follow, with any precision, the intricate thread of stimulation into the profound mystery of the reciprocal action of organ and tissue on organ and tissue. Still, we can see something of the course of events. The urea arising from the metamorphosis of nitrogenous tissue is carried by the current of the blood to the kidneys, and stimulates the secreting cells of these emunctories to extract it from the blood and deposit it, with the other ingredients of the urine, in the uriniferous tubules. The cholesterine that results from the nutritive changes in the nervous tissue is conducted by the circulation to the liver, and there stimulates the hepatic cells to abstract it from the blood, and turn it, with the other ingredients of the bile, into the hepatic ducts. Sapid food taken into the mouth impinges the gustatory nerves, and through a stimulant reflex action, the salivary glands pour out their saliva through their ducts into the mouth. But in this case it is not necessary that there should be a physical stimulant applied to the buccal mucous membrane to excite a flow of saliva, a mental impression will stimulate to the same end. Let a hungry man see, or think of, even, a savory dish of viands, and his salivary ducts will squirt out their secretions in a perceptible stream.

The ceaseless activity of the heart, and the continual operation of the respiratory apparatus, are probably due to a nervous stimulation sent down from the intra-cranial nervous centers, but there is the immense service of assimilation performed by the cells of every part of the body, that one is not quite so sure whether it is under the control and direct guiding power of the nerves or not. Probably not. It is reasonably certain that the capillary circulation upon which the cells depend for the pabulum they metamorphose into tissue is largely influenced by the nervous system, especially the sympathetic department; but it is apparently true that, with warmth and other

Digitized by Google

surroundings normal, the presence of the pubulum is the sufficient stimulant to keep the ultimate cells at their vital labor. At least in the lower animal organizations, where the individual consists of one or a few cells, there is no nervous system, the medium in which they live, and which bears to them their food, seeming to be all that is necessary to excite their vital activity, which is, of course, very simple, but, as far as it goes, apparently of the same nature as a primitive cell of the higher organizations. And, furthermore, there is the whole vegetable kingdom replete with the most luxuriant life, sometimes of immense growth, and not unfrequently having great diversity of development, yet the whole is accomplished through cell action, without the presence of a nervous system or any known analogue.

Normal stimulants applied to normal structure induce normal or physiological activity, which is known as health; but abnormal stimulants applied to normal structure induce abnormal or pathological activity, which is known as disease. This pathological activity may pertain to the body as a whole, or to any part of it, but as the physiological activity has its unit in the ultimate cell, so must the pathological activity have its unit in the ultimate cell, for disease, of whatever nature or extent, is nothing more nor less than misdirected vital activity. Now, if the normal pabulum presented to the cell is the stimulant that keeps up its normal activity, we may suppose that abnormal pabulum would be the stimulant to diseased activity, and so it probably is, in the majority of cases; but we have seen that for the pabulum to keep up the healthy activity of the cells, the surroundings must be normal also, and a failure in this particular will be followed by the same result that would follow abnormality in the stimulant. For example: At the ordinary temperature, the normal forces produce a cuticular covering to the external surface of the body, but a sudden temporary increase or decrease of the temperature to a certain point would be followed by a blister. And the same condition may be produced by cantharides, ammonia, friction, and many other agencies.

In some instances, a pathological stimulant applied to the surface establishes diseased activity, and the result of this, is a fluid which is carried into the system by the lymphatics, and creates general disease. Syphilis is a noted example of this kind. A little chancre, of scarcely noticeable attributes, will breed a virus that will affect the neighboring lymphatic glands, and then, through a long series of changes, involve the skin, the mucous membranes, the cartilages, the bones, and finally every tissue of the system, ultimately causing death by its ravages.

In physiological activity there is in each tissue, by virtue of a law of its being, a selective power in appropriating its needed pabulum from the common stock. We must suppose it to be the same mass of blood that is presented to the ultimate cells of the bones and the nerves, yet, by an inherent discrimination, the bones shall select the lime and pass the phosphorous, and, on the other hand, the nervous tissues shall select the phosphorous and pass the lime. So of pathological stimulants, some of them excite certain tissues to diseased activity, while other tissues are insensible to their presence.

Digitized by Google

Thus aloes will excite the activity of the intestinal canal, while morphia will expend its force on the nervous system.

Now, if we attempt to apply these principles and facts to the elucidation of the pathology of diphtheria, what shall we realize?

The essential characteristic of diphtheria is a peculiar exudation, or adventitious membrane, and this may appear on any of the exposed mucous membranes, or on any other surface denuded of its cuticle. The cells of the fauces, however, appear to be the preferable seat of the exudation, and here, in a vast majority of the cases, it is found. There is nothing, either in the symptoms or the nature of the membrane, that will enable us to judge whether the pathological stimulant exciting the disease, made its original impression locally on the throat, or was taken into the circulation and carried by the current of the blood to the throat, where the selective affinity of the cells appropriated it, and were thereby excited to pathological activity.

However the diphtheritic stimulant may get to the part affected by it, the result is a new activity in the cellular structure creating the epithelium of the part, producing an abnormal tissue which pushes the epithelium before it, and for the time takes its place. The histological structure of the epithelium is a membranous expansion of cells, without perceptible intercellular matter, while in the diphtheritic membrane the microscope shows that "a fine fibrillation is the basis of this exudation, and the fibres are everywhere sprinkled over with minute granular matter. But there are parts in which no fibres can be seen. In such parts the small nucleated and the elongated cells take their place. Pus cells are also seen overlying the fibres in certain parts. These were probably produced on the attached surface." (Prof. A. Clarke, Am. Med. Times, April 6, 1861; p. 22.)

Instead, therefore, of making epithelium, the cells are transformed into fibres and granular matter, and where the nucleated and elongated cells take the place of fibres, it is because, for want of proper age, or something else, the transformation has not been completed. The pus cells are still another mal-formation of the part, and arise between the normal and abnormal membrane, and allow the latter to loosen and fall off; but when the false membrane has so fallen off, it does not follow that pus will continue to be made, nor that the normal activity will be reinstated at once; on the contrary, the formation of pus ceases, and a new false membrane is produced and cast off, and perhaps a third or fourth, before the natural epithelium is reproduced. This would permit us to make the ready inference that either the age or the thickness of the adventitious membrane arrests its own growth, and the pus is formed in obedience to a vital decree that the membrane must be cast off.

The microscopic character of the diphtheritic membrane is the same wherever located, and, although there are frequently found in it fat cells, fungous growths, and spores, they are accidental complications, and in no wise essential.

In the diphtheritic throat there is frequently, perhaps generally, a lack of the usual sensitiveness of the mucous membrane, due undoubtedly to the effect of the diseased activity on the peripheral extremity of the nerves, but

Digitized by Google

there is also among the phenomena of diphtheria, frequently, a paralysis of, sometimes one part of the system, sometimes of another, which probably arises from the absorption of the pathological stimulant, and it is carried by the blood to the nervous center of the part paralyzed, and there, through a mysterious selective affinity, works its disturbance.

The swelling of the glands of the neck, the pains in various parts of the body, and other phenomena manifested remotely and internally from the surface disease, must also be the result of the absorption of the stimulant, either originally from external sources, or more recently from the local disease; and the long catalogue of irregular, uncertain, and treacherous sequelæ that follows diphtheria, must likewise be credited to the absorption of the virus, which, taken into the blood, is carried by the circulation to the cells of some tissue accepting its perturbating influence through their misdirected selective affinity.

At the close of the reading of the paper, the following remarks were made.

Dr. R. E. Haughton said:

I have an objection to make to the first statement of the gentleman, in regard to there being no known pathology of diphtheria. I have nothing to object to in the general views set forth in the paper, but I must object to the statement referred to. If I am wrong, I hope to be corrected. The disease is one difficult of treatment, one that we do not know all about, of course; but as it has been generally treated as an inflammation, I submit that if the disease has no known pathology, inflammation does not exist. Trousseau pronouces diphtheria a disease of inflammation, attended with fever and exudation on the surface, and that this exudation gave evidence of inflammation.

Dr. Moffett said:

I have anxiously listened to the paper just read, and have waited for an expression from those older hands. The subject is one that excites in me the profoundest and most intense interest. If it is true, as the gentleman claims, that there is no known pathology of diphtheria, there is one of two things we should do, either quit attempting to treat the disease, or try to find out something concerning the nature of it. I conceive that I know as much about diphtheria as I know of intermittent or scarlet fever, or rheumatism, or any other malady. The essay beautifully explains the intricate movements of the living organism, and the subject of cellular physiology. We know that the kidneys separate from the blood the materials that become inimical to the living body; that the liver performs certain other functions; why it is that the kidney does this, we are not prepared to say. We call it selective affinity. Through understanding the office of the kidney, and of the liver, we come to understand the office of other organs. If diphtheria has no pathology, if we only know that it is something different from any other disease, we still know something of its signs, and these signs are its pathology. What else do we know about any other disease? In a certain case we see

Digitized by Google

an exudation on the fauces, tonsils, on the curtain of the palate, in different parts of the body. From something of this kind, or from other observations, we know that the disease is something different from other well defined diseases, and call it diphtheria. We determine something in regard to its character from the effect of medicines. In fact this is one of the chief means of diagnosis. In this disease we find, as is generally found in cases of croup, a throwing out in the fauces of exudation, and a closing up of the rimagloditis, and the patient dies from his inability to inhale a sufficient amount of air, or there is an exhaustion of the vital forces, and the patient dies of actual debility. Suppose you were called upon to treat a case of this character. From the physiology and pathology of disease it would seem to be necessary to introduce into the blood the elements necessary to burn out the morbid material. There is not a sufficiency of oxygen, and that agent must be supplied. Chloride of potash will revitalize the red cerpuscles; muriated tincture of iron and quinia should be employed to produce rapid oxidation of mobid material. Iron should be used in large quantities. Alcohol, containing a large amount of oxygen, will be found serviceable in burning out the morbid material not otherwise expelled. These thoughts came up during the reading of the paper, and I thought it might be of benefit to give them expression. I must say that the argument of the paper has served to awaken much earnest reflection in my mind upon the subject treated of.

Dr. J. F. Hibberd:

Notwithstanding the objections made to my first statement, in regard to there being no known pathology of diphtheria, I am ready to reiterate and defend the statement until these gentlemen come forward with their proofs that my position is untenable. I would like to ask of Dr. Moffett what he knows of the pathology of intermittent fever. Until he tells that, I shall continue to hold that there is no known pathology of diphtheria. The gentleman, I think, confounds different ideas. Pathological anatomy is no more pathology than is common anatomy physiology. We find in diphtheria one structure, by an abnormal activity, producing a second, for there is no diphtheria without that second, or false membrane. Now I would like the gentlemen to tell me what the character of that activity is that produces this false membrane. It is easy enough to cry out mistake, but quite another thing to show where the mistake is.

Dr. J. I. Rooker made a few remarks in reference to the similarity between syphilitic and diphtherial symptoms, and cited the cases of several physicians in France who had died by being poisoned with diphtherial matter, and asked an opinion as to whether the disease was really contagious, or infectious, or the false membrane of primary character?

Dr. Hibberd said:

I don't think there is any evidence leading us to know whether the impression is made in the fauces primarily, or in the blood. In the cases cited of

Digitized by Google

the physicians poisoned by diphtherial matter, I think it might have been occasioned by the throwing of the secretions into the face, the poisons obtaining lodgment in the nostrils, and then ordinary inhalation of air transferring the poison to the fauces; or, it may be that the poison was absorbed and carried to the fauces by the circulation. If we apply belladonna to the eye, the effect will be local, manifested by dilation of the pupil, and presently there will be an absorption sufficient to produce on the system constitutional effects. As to the virus of diphtheria, there is nothing to lead us to know whether it is taken originally into the fauces, or taken into the blood, and then poisons the fauces by the selective affinity of that part of the system.

Digitized by Google

REVIEW OF THE BILIARY FUNCTION.

BY V. KERSEY, M. D., OF RICHMOND.

Three years ago this Society was presented with a voluntary paper on "The Liver." It contained four explicit propositions, which were, at the time, distinctly controverted. At the close of the discussion I was appointed to produce to the next meeting a paper on cholagogues. In the performance of this service, it was thought right to maintain the range of the original discussion, and attempt such elucidation of each topic as the limited space would permit.

Addressed exclusively to the intelligent professional reader, the paper was designed to be suggestive, rather than logically conclusive of the views it maintained. It gave rise to an exhaustive essay entitled "Bile," produced by the author of the paper on "The Liver," and published in our "Transactions" of last year.

Notwithstanding the reputation for intelligence enjoyed by the author of these kindred papers, "The Liver," and "Bile," (he having recently occupied for an entire term, a responsible chair in one of the first medical colleges in the Mississippi Valley) I can not feel acquitted of obligations to the profession of the State without a second paper, in the progress of which it is hoped the motives for its production may become sufficiently apparent.

The essay entitled "Bile," was written expressly "to defend and substantiate certain statements which appeared in the paper on 'The Liver,'" as voluntary affirmative propositions, the author thus assuming the entire burden of their proof.

That we may not overlook its claims, nor fail in our appreciation of its importance, it is proper to notice certain logical canons and laws of evidence which the "essay" would press into service in all medical researches, and thus preclude the possibility of error in the future. They are not expressed in the usual form of aphorisms, but enforced by the more striking method of obvious examples.

It says: "In order, then, to demonstrate mercury a cholagogue, you must not only be assured of the excretion of the bile from the bowels—you must also show, by direct experiment, or clear induction, that this self-same bile was manufactured by the liver, at the instance of the mercury, at a time when such bile would not otherwise have been secreted. Such are the only

Digitized by Google

terms upon which science accepts investigation and adopts conclusions." The same spirit is sufficiently conspicuous in what follows: "It is to the credence given to the positive declarations of prominent men without proof; to the acceptance of the broadest generalities, and the loosest deduction without test or scrutiny; and to the unfortunate adoption of the bad logic set forth in the phrase, "post hoc, ergo propter hoc," that we find so many fallacies, not only in the theory of medicine, but in its practice also.

It is a rare privilege to enjoy the perusal of a paper affording such internal assurance that its propositions are self-evident, its declarations demonstrated, its generalizations unavoidable, its deductions tested and scrutinized, its logic severe and kept well in hand.

"'Tis said that he who forged the chain of fate,
Was ever after doomed to wear it."

While it is admitted that demonstrative knowledge is exceedingly desirable in medicine—that we should, in fact, never rest content with probability where certainty is attainable—it is unwise to overlook the fact that most of the business of life must either be suspended, or proceed upon a bare preponderance of chances—that many valuable sciences reach no higher truth than what is indicated by the different grades of probability. This results from the nature of the inquiry, not from the spirit in which it is conducted. That it will never be otherwise is beyond a question. Few things could be so deeply injurious to civilization as the practical repudiation of all knowledge that falls short of demonstration. Few so utterly repugnant to common sense as to attempt a positive solution, on the principles of exact science, of that incessant run of important problems which impart a living interest to military operations, medical practice, political economy, and common industry.

The practical application of the above cited canon obviously requires demonstrative knowledge of future events. One of the conditions is that the physician "show by direct experiment or clear induction," that bile will not be secreted during an indicated period of future time without the use of certain means at his disposal. It might be pleasant enough to possess such knowledge, but the manifest absurdity of attempting to acquire it "by direct experiment, clear induction," or, indeed, by any other method, is likely to prevent most physicians from engaging in the pursuit.

Few facts in therapeutics are better known than the cathartic property of castor oil. Yet, under the rules now proposed, we know, and can know, nothing of the kind. Defecation is a natural process, subject to great irregularities, both in health and in disease. It is manifestly impossible to demonstrate that it will not occur within six or twelve hours at the instance of natural causes. You may judge it will not; proceed to administer oil, and witness copious defecation. But to assume that the oil causes this defecation is "*post hoc*" logic. If, on the other hand, you accept the docrine that castor oil is a cathartic, on existing testimony, or, indeed, on any of which the sub-

Digitized by Google

ject admits, you are simply "giving credence to the positive declarations of prominent men without proof."

But enough has been said to make it manifest—if, indeed, it was not manifest without a word—that the physician must ignore the better half of his useful knowledge; set aside the logical canon proposed; or stultify his common sense by the pretense that he is constantly doing what every sound mind perceives to be in its nature impracticable.

The first of the four propositions in controversy is stated as follows in the paper on "The Liver:"

"We know the hepatic artery must furnish the ingredients for the bile." It is reiterated in the essay in these words:

"We can not avoid the conviction that the arterial blood affords the pabulum for the preparation of the bile."

Our first duty is to notice the grounds upon which the essay attempts to support this position.

On a single page (Trans, 57) the essay maintains, First, the double origin of the liver. Second, that from one of its origins (to-wit: the common trunk of the umbilical and portal veins) there is developed a blood gland, without duct. Third, from the other origin (to-wit: the intestine) there sprouts up a secreting gland. Fourth, these two glands are as markedly separate in their origin and nature as the spleen and pancreas. Fifth, in the lower animals, they are distinct in the embryo, and not conjoined in the adult. Sixth, in the human embryo their vascular relations are separate and exclusive. Seventh, in adult man the supply of blood maintains the same distinction as when the two glands were separate in the embryo.

These statements are put forward as the legitimate anatomical basis of a satisfactory analogical proof that "the hepatic artery must furnish the material for the bile." While it is known that many able physiologists maintain views, and give expression to doctrines very similar to most of these propositions, it is believed that, as they appear in the essay, they are likely to lead to an erroneous apprehension of the facts.

Morel—the typical representative of the doctrine of the double origin of the liver, teaches (Human Histology, Van Buren's edition, 1861, p. 135) that the first traces of the liver make their appearance as two little masses of primordial cells situated, the one upon the inner, the other upon the outer layer of the intestinal wall.

Thus, according to this view, the two origins of the liver are of the same nature, and separated only by the wall of the intestine.

From a more recent publication, by an enlightened advocate of the double, not to say the tripple, function of the liver, we have the following slightly different, and much more explicit view, of its origin, based on early observation:

"The first rudiment of the liver is formed by the thickening of the cells (a portion of the original embryonic mass) in the wall of the intestine, at the spot where the hepatic duct is to discharge itself. This thickening increases, and forms a projection on the exterior of the canal; soon after the lining

Digitized by Google

membrane of the intestine dips down into it, forming a cæcum surrounded by a mass of cells. The increase of the organ takes place by a continual budding forth of new cells from its periphery. The cells of the exterior are metamorphosed into fibrous tissue for the investment of the organ; those of the interior break down into ducts, while those which occupy the intervening space give origin to the secretory cells. The hepatic mass is gradually removed to a distance from the alimentary canal, and the cæcum is lengthened into the main trunk of the hepatic duct. The development of the liver is similar to that of other glands evolved from the parities of the alimentary canal, as the pancreas and salivary glands, since they all commence in little masses of cells, formed by an increased development, at certain spots, of the layer of blastema which originally constitute its wall; and whilst some of these cells give origin to the proper vesicles of each gland, others form its ducts and tubuli by deliquescence." (Carpenter's Hum. Phys. Amer. from the last London edition, 1862, p. 796, et seq. Als. Comp. Phys. Amer. edition, p. 427, et seq.)

Similar views, in all essential particulars, are maintained by Professor Kolliker (Human Histology, Sydenham Soc. ed. vol. 2, p. 132. et seq.) Speaking of the development of the biliary ducts, the so-called tubular gland, Kolliker says: "The excavation commences in the common biliary duct, proceeds toward the branches, and must be considered to take place exactly as in other glands." (p. 134.)

Thus it appears that the first position of the essay is not an absolutely settled question. If however, we admit the double origin of the liver, and regard it in its true light, it at once loses that imposing significance into which it is wrought by the essay, and becomes a matter of the least possible moment, namely: whether a little mass of primordial cells, appearing at a given spot in the wall of the rudimentary intestine originates on both the inner and outer coats of the tube at precisely the same time; or, first, on the inner, then on the outer, and presently quite away from the intestine, with which it remains connected by the choledoch duct alone. Either view of the subject renders it equally apparent that there is no portion of the liver that does not "sprout up from the intestine," and thus destroys all pretense to pertinency in the second and third positions of the essay.

The fourth position, namely: "That these two glands are as markedly separate in their origin as the spleen and pancreas," must, in any view of the facts, be regarded as an unjustifiable exaggeration. In that view which is undoubtedly best supported it is wholly erroneous.

The fifth position of the essay, in these words: "Carpenter, in his Comparative Physiology, (page 424) informs us that in the invertebrated animals these two portions of the liver are not only distinct in the embryo, but that they are not conjoined in the adult," is not to be found on the page cited, nor, as I believe, on any other page of the work cited. Neither have I found, outside the essay, the shadow of probability for such an idea, notwithstanding the author's aid in the search has been repeatedly invoked, In view of

Digitized by Google

all the facts, it seems next to certain that we are indebted to the inventive genius of the essay for this rare piece of anatomical information.

Let it be borne in mind that the two portions of the liver represented as "distinct," "not conjoined," are the "blood gland" and the "tubular gland." Now the only well defined and fully authenticated blood gland function of the liver is its sugar making capacity. Claude Bernard, long ago, showed by a series of accurate and precise experiments, that the livers of all classes of animals, vertebrated and invertebrated, produce sugar from the blood, independently of digestion and the quality of the food. (Bernard and Robin on the blood, p. 100, et seq.) But Bernard says, (op. cit. p. 103) "In invertebrated animals, the sugar, in place of going from the liver by the hepatic veins, goes back to the intestine by the hepatic duct, and is absorbed there before going to the respiratory organs." It is thus made apparent that these two portions of the liver are not separate in this large class of animals, but that the liver sugar and the bile are products of one organ, and elaborated from one kind of blood. Hence we derive a sound analogical probability that, in the vertibrated class of animals also, these two products of liver action are elaborated by one organ and derived from one kind of blood.

Sixth: "In the human embryo, the blood gland part of the liver is confined exclusively to the venous system, and the secreting part is confined exclusively to the arterial system in their vascular relations." Here again we have a remarkable announcement, suggesting the same paternity, and rightfully inspiring similar confidence with its immediate predecessor, with this distinction, it is not, like the former, erroneously attributed to a distinguished author.

Seventh: "In adult man the supply of blood maintains the same distinction as when these two portions were separate in the embryo." "And this," we are told, "is abundantly verified by Carpenter, Morel, and Robin." What does this imply, when these parts were obviously never separate in the embryo?

Carpenter says, (Hum. Phys. pp. 368, 369) "each lobule of the liver gives us the essential characters of the whole gland. * * * The hepatic artery sends branches to every part of the liver. It supplies the walls of the portal and hepatic veins, the ducts, the capsule, and the lobules."

Morel says, (op. cit., p. 130) "a lobule of the liver represents in its structure a miniature of the whole organ." "A lobule of the human liver is one-fourth to one-half a line in diameter; is composed of a mass of hepatic cells, the terminal branches of the portal vein and hepatic artery, and of the radicles of the hepatic vein and hepatic duct." Where, then, is the seat of these two independent glands, with their separate and distinct vascular relations?

It is agreed on all hands that three of these orders of vessels, to-wit: the portal vein, and the hepatic artery and duct, enter the liver together, and send branches to each lobule, which they invest with a close plexus, penetrate more or less abundantly, and break up into capillaries—while the hepatic vein, originating at many points toward the center of the lobule collects and carries forward its regenerated blood. Hence it follows that between this

Digitized by Google

perilobular investment and these hepatic venous radicles, in the radius of the lobule, a space of one-eighth to one-fourth of a line, resides the entire gland power of the liver. Its sugar making function and its bile making function are there. Its blood gland and its tubular gland are there. And there the essay finds ample space to exhibit the organ as two independent glands, the one supplied exclusively with arterial blood, the other exclusively with venous blood.

Any one accustomed to contemplate these facts, in connection with the laws of capillary osmosis—of cell-action, both in nutrition and secretion—of cell territories and their extent, as elucidated by Virchow in his Cel. Path., is likely to perceive insuperable difficulties in the task so confidently assumed in the essay.

The essay maintains, on authority of Robin, that "in cirrhosis, that part of the liver to which the portal vein is distributed, (the lobule) becomes disorganized and incapable of performing its function, and yet the secretion of bile still goes on." I do not know what Robin may have said to justify this assumption. But it is the obvious purpose of the essay to show, from cirrhosis, that the lobule, and therefore the portal blood, are not necessary to the formation of bile. In the early stage of all cases, and throughout some cases of this disease, bile undoubtedly continues to be secreted; simply, however, because the destructive process is limited to a portion of the gland. Patients usually perish from this disease before every lobule of the liver is wholly disorganized.

Cirrhosis results from hypertrophy of Glisson's capsule and its trabeculæ. In the progressive development of the disease, firm bands of connective tissue compress and destroy here and there a lobule. "This process may go on from slight impairment to complete suppression of the hepatic function, arresting not only the secretion of bile, but the metamorphosis of matter and the elaboration of the blood."—(Frerichs Clin. Treat. on Diseases of the Liver. Sydenham Soc. ed., vol. 2, p. 21.) Accordingly, among the results of cirrhosis, this observer cites jaundice, pale stools, bile-pigment and leucine in the urine, delirium, coma, stertor, and death from cholæmia, (op. cit., vol. 1, p. 241, et. seq.)

Although by no means so full and conclusive as Frerichs, most recent authors, Craigie, Wood, Bennett, Flint, Aitken, Da Costa, Flint, Jr., and others, shed sufficient light on the nature, progress, and terminations of this disease, one would fain hope, to prevent the attentive medical reader from citing cirrhosis in support of the doctrine under discussion.

We come now to what the essay calls the direct testimony in support of its position. This evidence is derived entirely from two abnormal conditions, namely: cases of malformation, in which the common trunk of the portal vein enters the ascending cava in place of being distributed through the liver; and cases of permanent obstruction of the trunk and principal branches of this vessel by pressure, embolism, or phlebitis, in all of which bile is reported to have been secreted. The instances cited are probably all authentic; at any rate, several other carefully observed cases are on record, and they

Digitized by Google

should be allowed their full weight in the determination of the question at issue.

The wonderful compensatory power of the circulation, as elucidated in the ligation of large arteries like the carotids and iliacs, affords assurance that nature will furnish a vicarious supply of blood for the maintenance of the several functions of the liver, in cases where obstruction of the portal trunk is long survived.

Malformations of large vessels, withholding from important organs the usual supply of blood in embryonic life, must give rise to other anamolies, anatomical and physiological, in those organs. Hence these abnormalities obviously do not afford the conditions for a conclusive solution of this purely physiological question.

Were it, however, entirely certain, that in these cases no blood enters the liver through vicarious channels, the question would still be far from an affirmative settlement. This will be sufficiently apparent if due attention be given to the following facts:

The portal vein has its origin in the capillaries of several distinct organs—prominent among these is the liver. The hepatic artery, in supplying nutriment to the various structures of the organ, is necessarily broken up into capillaries. These are collected into veinules, which constitute the internal or hepatic radicles of the portal vein. So far as is now known, the whole of the arterial blood furnished the liver is thus transmitted into the terminal branches of the portal vein, and passes forward through the lobules, contributing to the formation of bile. Thus, in cases of either malformation or obstruction of the portal trunk, an important source of portal blood remains unobstructed. (Kollicker, op. cit., vol. 2, p. 130, et seq.) (Cylop. of Anatomy and Physiology, London ed., vol. 3, p. 168, et seq.)

In these cases, that portion of the portal blood derived from sources outside the liver, passes forward, is aerated, and again distributed through the arteries, without having been subjected to the action of the liver. Hence, when it comes into this organ through the hepatic artery, and reaches the lobules through the channels above indicated, it can not fail to be rich in all the qualities of portal blood.

It is thus obvious that all the blood carried into the liver by the hepatic artery becomes portal, and is placed in a position to minister to the biliary function. While, on the hypothesis I am opposing, it is equally obvious that a small part only of this blood can possibly minister to this function, namely: that portion which is carried by some of its minute branches to the capillary extremities of the bile ducts. For it is only the blind terminal branches of these tubes, after they have lost their fibrous coat, their basement membrane, their columnar epithelium, and come "to consist of cells, or rather nuclei, closely set in a subgranular, homogeneous basis substance," that transmit bile through their walls by cell action. When, by uniting, they get a little larger, they lose their secretory power, become strictly excretory, and the structure of their walls forbids the idea of such transmission. (Kolliker op. cit., vol. 2, p. 121, et seq.) C. H. Jones' papers in the Philos. Trans, re-

Digitized by Google

produced by Huxley in his translations of Kolliker, (op. cit., vol. 1, p. 125.) Bernard and Robin, (op. cit., p. 195.)

In the only case of this malformation where I have found the hepatic circulation reported, the umbilical (hepatic portal) vein was pervious, of considerable size, ramified as usual through the portal canals, and terminated as usual in the lobular venous plexus; thus securing the usual channels to, and through the lobules, for the blood brought into the liver by the hepatic artery, and transferred through its capillaries to the internal or hepatic radicles of the portal vein. The supply of arterial blood in this case was quite unusually large. (Cyclop. Anat. Phys., vol. 3, p. 179.)

We have now considered the evidence, analogical and direct, upon which the essay founds its doctrine. In the former department some of the alleged facts seem to have little bearing on the subject, some are manifestly exaggerated, and some are by no means shown to be true. In the department called "direct testimony," the essay wholly overlooks well known facts and valid considerations, which can not fail to vitiate and set aside its premises. Yet, reckless of the shade of its departed logic, it announces with comic gravity that it has very clearly shown its doctrine to be unavoidable.

That the biliary duct, with its contained cells, and the hepatic artery, constitute the entire biliary apparatus, is what I would oppose.

That the lobules, composed mainly of venous capillaries and liver cells, are concerned in the production of bile; that this fluid is derived entirely from portal blood; that it is elaborated therefrom by the liver cells, and transmitted by them toward the surface of the lobules, till it reaches the blind capillary apices of the biliary ducts, whose contained cells subject it to final cell action, and throw it into excretory channels, is what I would maintain.

The truth involved in these hypothesis is not likely to find a clear elucidation through microscopic vision alone. Other facts and considerations should be brought into bearing. It may be that these are now sufficiently numerous and pertinent to afford a solution conclusive to all sound minds, if some one of adequate skill would distinctly show their significance. Nothing will be attempted by me, but to present, as briefly as may be, some additional considerations which have had their weight in leading me to favor the latter hypothesis.

It is well known that, in several conditions of the liver, biliary matter accumulates in those hepatic cells situated about the center of the lobule. Wedl has pointed out this condition in what is called nutmeg liver.—(Bennett's Clin. Med., p. 471.) Frerichs shows that it is a common condition in some stages of fatty liver, (op. cit., vol. 1, p. 291.) And, speaking of jaundice, he says, "the deposit of pigment commences in the hepatic cells, and is most abundant in those cells which surround the central vein of the lobules," (op. cit., vol. 1, pp. 88, 89.)

These facts seem scarcely compatible with the idea that bile is elaborated only by cells within the hepatic ducts; and only from blood furnished by arteries embracing those ducts, for it is scarcely held by any one that either ducts or arteries approach the center of the lobule.

Digitized by Google

"It has been observed by Prof. E. H. Waber that during the last three days of incubation of the chick, the liver is made bright yellow by the absorption of the yolk, which fills and clogs all the minute branches of the portal vein; the material of the yolk disappears, part being developed into constituents of blood, which enter the circulation, and the rest forming bile, and being discharged into the intestines."—(Carpenter's Comp. Phys., p. 386.)

In that form of physiological fatty liver which so constantly occurs after digestion in certain young sucking animals, Prof. Virchow says, upon his own personal observations, "the fat which, for a time, is contained in the hepatic cells, is manifestly excreted from them into the biliary ducts." (Cel. Palh., Amer. ed., p. 371.)

If these observations are to be credited, there remains little ground to question that the portal blood supplies the pabulum for the bile, or that this fluid is elaborated by the hepatic cells.

In acute atrophy of the liver, the skin is yellow, the stools clay-like, from deficiency of bile, and the urine is saturated with brown coloring matter, affording the reaction of bile pigment. There is noisy delirium, convulsions, stupor, coma, stertor, and death. The disease destroys life rarely in less than a day, mostly in less than a week. The liver is always shriveled and wasted, mostly losing one-third, rarely two-thirds of its weight. The portal and hepatic veins are usually normal, so the hepatic artery and ducts, except that the mucous membrane of the latter is usually covered with gray mucous in place of bile. The lobule alone suffers, and that by the disintegration of the hepatic cells. In some cases not a trace of these can be detected upon microscopic examination of the hepatic tissue. Amidst the detritus of the secreting apparatus of the liver, as well as in the blood and urine, pigment, leucine, and tyrosine are abundant. (Frerichs op. cit., vol. 1, chap. 5.)

These facts are corroborated by most recent authorities. If they are trustworthy, the blood gland alone is disorganized in this disease, and glycogenesis alone should be suspended. The biliary ducts and hepatic artery—the so-called tubular gland—the reputed biliary apparatus is unimpaired, and its function should go on. Yet this condition, above all others, produces typical cholæmia.

It would seem next to impossible to misinterpret facts so entirely patent and direct in their meaning.

In the portal blood there are from 70 to 287 parts of serum to 100 parts of moist globules, while in the blood of the hepatic vein there are from 32 to 73 parts of serum to 100 parts of moist globules. (Lehman's Phys. Chem., vol. 1, p. 499.) These facts are stated in general terms, without numbers, in this author's Chem. Phys., p. 146. They are distinctly brought out, and supported by closely corresponding numbers, in the experiments of Bernard and Robin on the blood, (op. cit. p. 106.)

These observations show remarkable variations in the proportion of serum to globules in both kinds of blood. These variations correspond with the variations in the quantity of bile secreted, and are due to the same causes, namely: the supply of aliment and the activity of digestion.

Digitized by Google

Allowing for a considerable increase of globules in the liver, still the facts before us show a positive loss of nearly half its serum during the passage of the blood from the portal to the hepatic vein—from the surface to the center of the lobule. This fluid must escape by osmosis through the capiliary walls, and it must be carried off through the biliary ducts. Accordingly we find several pounds of bile, of a specific gravity considerably below that of normal serum, daily drained off through these channels. These facts need no comment. The lesson they teach is equally obvious and inevitable.

The results of vivisections in this department of physiological inquiry have not, so far as I know, received proper analysis.

The legation of a large vessel, supplying blood to a vital organ, may arrest the function of the organ by the shock of the operation alone, or by cutting off the supply of blood alone. Which of these two adequate causes suspends the function of the organ, it is sometimes impossible to say. For example: if the legation of the portal trunk arrest, at once, the secretion of bile, and very soon the life of the animal, we may attribute both results to either cause, and of course we get no physiological light from the operation. But if this operation occasionally fail to arrest secretion, we at once learn two things; first, that arrest of secretion, when it occurs, is due to shock; and second, that bile may be secreted without an influx of blood through the portal trunk.

The portal vein has been repeatedly tied; usually producing instantaneous arrest of the secretion of bile, and soon after the death of the animal. But this result has not been uniform. It was tied by B. Phillips, a British surgeon, and the bile continued to be secreted, though in diminished quantity (Cyclop. Anat. and Phys., vol. 3, p. 179.) This was the result in a case alluded to by Carpenter.—(Hum. Phys., p. 378.) And Chassagne refers to other cases where the result was similar.—(Am. Journ. Med. Sci. Jan., 1864, p. 229.) Thus we learn that the influx of blood through the portal trunk is not necessary to the secretion of bile.

This fact admits of ready solution on either hypothesis under consideration. On the former, the operation obviously presents no difficulty beyond the shock; certain minute branches of the hepatic artery yielding the entire material for the bile directly to the capillary radicles of the hepatic duct, as in the normal condition.

On the latter hypothesis, all the blood of the hepatic artery, having discharged its nutritive function, and passed into the hepatic radicles of the portal vein, thence, through the normal channels, into the lobular venous plexus ministers as usual to the biliary function. On this hypothesis, the quantity of blood ministering to this secretion, is greatly reduced by the ligation of the portal trunk. Yet it can not fail to be seen that it remains vastly greater, even under this reduction, than it is in the normal condition, on the former hypothesis.

It is thus sufficiently manifest that this operation, with all its possible results, must constantly fail to furnish the elements for a conclusive solution of this problem.

Digitized by Google

The ligation of the hepatic artery is capable of shedding a much more conclusive light upon this difficult question. If this operation arrest, at once, the secretion of bile, and soon after destroy life, both effects may be attributed to either cause, and nothing is learned. If it produce temporary arrest of secretion—to be restored sometime after with reaction and returning vigor, the solution must lie in doubt. For it is obvious that, on the one hand, these results may flow respectively from shock and reaction, the portal blood being the source of the bile: or, on the other hand, they may flow respectively from cutting off the supply of arterial blood, and its subsequent restoration through vicarious channels, the arterial blood being the source of the bile. Hence these results afford no positive light on the subject.

But if the ligation of the hepatic artery fail to arrest the secretion of bile at all; if the shock of a terrible operation and cutting off the supply of arterial blood, both together, fail to arrest, even for a time, the secretion of bile, the result demonstrates that arterial blood is not the source of bile. The only possible fault in the demonstration lies in the doubt whether arterial blood is entirely excluded from the liver by the operation. Remove this uncertainty, and the demonstration is perfect and unquestionable.

B. Phillips, the British surgeon mentioned above, who tied the portal vein, performed this operation also, "and perceived no change in the biliary secretion when the hepatic artery was tied."—(Cyclop. Anat. and Phys., vol. 3, p. 179.)

Still it might be conjectured that even in this case a sufficient arterial circulation was maintained in the liver, by anastomosis with collateral arteries, to supply the material for the bile, and thus to vitiate the otherwise obvious conclusion.

But Moritz Schiff, Professor of Physiology in the University of Zurich, some years ago performed a series of experiments remarkable for sagacity and success, whose results entirely obviate this uncertainty, and render the demonstration inevitable and complete.

The readers of medical literature will remember a review of these experiments, and their singularly conclusive results, published in the American Journal of Medical Sciences for January 1864, p. 228. From this valuable abstract of Schiff's experiments I have need to quote but a single sentence: "In order to prevent the circulation of arterial blood in the liver, M. Schiff found that in dogs and cats it was necessary to ligate all the branches of the coeliac axis, also the inferior diaphragmatic artery. *After the occlusion of these vessels, the secretion of bile still continues and in quantity.*" Here, with an essentially imperfect presentation of the significant facts bearing on this question, and without a word of comment, I gladly leave the subject—comfortable in the assurance that truth has the innate power to commend itself to the intelligence and good sense of an enlightened profession. But I may not disavow a curious interest in the anomalous psychological prodigy that can deliberately analyze facts possessing all the elements of conclusive demonstration, like those brought forward by Schiff, and find in them no power but to intensify the energy of convictions which they utterly refute. (See

Digitized by Google

review of Schiff's experiments in the Western Journal of Medicine, for December, 1867, p. 711.)

The second of the four propositions in controversy is stated as follows, in the paper on the liver:

"The bile is poured into the duodenum at the rate of three or four pounds a day, but we know nothing of its service there, or of its destination afterwards, except the 10½ grains of cholesterin."

The essay says, (pp. 59–60,) "The bile salts and Biliverdine lose their identity in the small intestine. What purpose they serve, or what becomes of them, is alike unknown." "The history of the bile is a confession of our profound ignorance of its function and destination."

This portion of the essay is, to a great extent, given to a remarkable exhibition of those eminent physiological chemists, who are devoting their lives to the investigation of the more difficult departments of medical science. Their labors, it would seem, are so stupidly conducted as to essentially augment the inherent perplexity of the subjects they investigate; and when they exhaust their cunning in these ill-advised chemical researches, they call to their aid the imagination, whose vagaries they would enforce as the deductions of science. Our logical essay very discreetly leaves them "to flounder among the intricacies of their own inventions," and proceeds with admirable directness to the above cited conclusions.

Precisely who these "eminent and excellent physiological chemists and gentlemen" are, we are not informed, nor precisely what false and silly pretenses they are making. This is undoubtedly the best way, for it renders the impeachment impregnable in its very vagueness, while it is made entirely plain that they are not "men of inquiring philosophical minds," or they would march hand in hand with the essay to its favorite conclusions, which are shown to be "satisfactory" to all such minds.

But notwithstanding the shade thus projected upon physiological chemistry, I shall put forward, as scientific truth, its well supported teachings.

The liver of a well-grown man, on full mixed diet, secretes about three pounds of fluid bile in twenty-four hours.

This daily secretion of bile, when fresh, is composed about as follows:

88 per cent=42.24 ounces, water.
9 per cent= 4.32 ounces, glycocholate and taurocholate of soda.
1.35 per cent= .65 ounces, fats, fatty acids, cholostorin and pigment.
1.65 per cent= .79 ounces, inorganic salts and mucus.

Leaving out of view the water, inorganic salts and mucus, I shall consider only the organic solids secreted by the liver. Of these the chief are the conjugated acid; the glycocholic, composed of glycocine, or gelatin sugar, and cholic acid; and the taurocholic, composed of taurin and cholic acid.

Cholic acid, in a state of integrity, whether alone or in combination with its adjuncts, whether in the form of an acid or a soda salt, may be constantly recognized by its peculiar behavior with sugar and sulphuric acid. No other element of bile responds to this (Pettenkofer's) test.

Lehmann shows (Phys. Chem., vol. 1, pp. 419 and 516) that the bile acids

Digitized by Google

are, to a great extent, reabsorbed in their progress through the intestines, and that the unabsorbed residue is greatly changed, being found mostly in the form of taurin, dyslysin and other modified constituents which do not respond to Pettenkofer's test. He, however, always finds, in perfectly normal excrement, a little cholic acid, presenting a beautiful reaction with the sugar and acid test. (Op. cit., vol. 1, p. 119.) It is well known that Bidder and Schmidt have shown, by the quantity of sulphur remaining in the fæces, that one fifteenth part of the bile-acid, secreted by the liver, is discharged in the normal excrement. This one-fifteenth of 4.32 ounces amounts to 126 grains, which is thus incontestibly shown to be daily discharged, though mostly in a modified state.

The fats, fatty acids, cholesterin and pigment, amount to .65 of an ounce, or 284 grains in the 24 hours. Of this group of proximate elements of bile, cholesterin alone has received satisfactory quantitative analysis. Its origin and excrementitious character have been demonstrated, and the daily amount of the excretion is shown to be about 10 grains, which takes the form of stercorin in its progress through the intestines, when the digestive organs are fully employed. (See the researches of A. Flint, Jr., Am. Journal Medical Sciences, Oct. 1862, p. 305.)

The other members of this group, amounting in the aggregate to 274 grains, have not been separated, nor their relative proportions determined. It is probable, however, that the pigment is usually more abundant than all the fats and fatty acids together. The short time required to saturate the blood, color the tissues, and load the urine with this substance, when it fails to be discharged through the usual emunctories, affords *prima facie* evidence that it is excrementitious, and among the most abundant of the excretions. Assuming that the pigment is equal in quantity to the fats and their compounds, it amounts to 137 grains daily. Positive accuracy of course is not claimed for this estimate. It is devoutly to be wished that a single year may not be allowed to pass till we have an accurate quantitative analysis of this important excretion.

What do we know of the destiny of the bile-pigment? We shall not consult opinions, but the positive results of scientific research.

"The bile-pigment mixes with the contents of the intestine, becomes rapidly modified, and ceases to present the ordinary reaction with nitric acid. It occurs in this form in the solid excrements. Bile-pigment is never entirely absent from the excrements, except in those rare cases of icterus which are accompanied with a complete stoppage of the biliary secretion." (Lehmann Phys. Chem., vol. 1, p. 282.)

"In the intestine the bile-pigment is very soon altered so that, even with nitrous and nitric acids, it no longer affords the well known play of colors; it passes into a yellow pigment which we find in the excrements." (Lehmann Chem. Phys., p. 100.)

Frerichs shows that the bile-pigment passes rapidly through all the stages of transformtion, and ceases to react with nitric acid while it is yet an efficient coloring matter. That it is constantly present in the fœces, except in cases

Digitized by Google

where the bile is entirely shut off from the intestine, and that the condition of the secretory function of the liver may be readily determined by the quantity of pigment in the fæces. (Op. cit., vol. 1, p. 100, et seq.)

Flint says, "Though the bile-pigment can not usually be recognised by the *ordinary tests*, it is this which gives to the contents of the large intestine their peculiar color, which is lost when the bile is not discharged into the duodenum." (Phys. of Man, vol. 2, p. 399.)

We have then, according to these estimates:

126 grains of the acids, more or less changed.
10 grains of cholesterin, usually in the form of stercorin.
137 grains of modified bile-pigment.

Making an aggregate of 273 grains of organic bile-solids, daily discharged in the perfectly normal fæces.

I have not had access to the original observations of Bidder and Schmidt, from which they determine the respective quantities of the bile-acids absorbed and discharged from the intestines. But there is reason to believe that my aggregate of bile-solids discharged is too low. This doubtless arises, to some extent, from leaving out of view the fats and fatty acids, which are probably entirely excrementitious. This is done, however, because the difficulty of distinguishing them from similar substances of alimentary origin would lead to uncertainty in the estimate, which it is desirable to avoid.

Prof. Flint, speaking of these observations of Bidder and Schmidt, says: "The portion of the dry residue of the fæces, which could by any possibility represent the biliary matters, did not amount to one-fourth of the dry residue of the bile secreted." (Phys. of Man, vol. 2, p. 394.) Now one-fourth 4.32 ounces is 472.5 grains, nearly double my estimate of organic bile-solids daily discharged in the faeces.

Let us now notice the results of a large number of analyses, undertaken by Wehsarg, in order to determine the daily quantity, the composition, and the sources of normal human fæces. (See Lehmann Phys. Chem., vol. 1, p. 517 et seq.)

It is worthy of remark that in all these researches Wehsarg only once detected (with the usual test,) the presence of bile with certainty, although he often got doubtful indications. With the nitric acid test applied to the fresh fæces he only twice obtained undoubted manifestations of bile-pigment. Hence, he infers "that as a general rule no bile occurs in an unchanged state in the normal fæces."

The mean daily quantity of fæces (Wehsarg's obs.,) is 4.6 ounces, which consists, to a great extent, of water and other volatile matters.

The absolute quantity of solid matter discharged in 24 hours averages 1.08 ounces, or 472 grains.

The daily mean of precipitable inorganic salts is four per cent., or 19 grains, which we throw out of the fæces, as these salts are rejected from the aggregate of bile-solids; and this leaves the daily mean of organic solid excrements 453 grains.

The daily mean of undigested matters traceable to aliment, and varying as it varies, is 52.5 grains, being 11.33 per cent. of the solid fæces.

Digitized by Google

These analyses show a variable, yet constantly considerable quantity of the fats, whose origin is not clearly made out; but the quantity is greatly increased by the free use of fatty diet. It is next to certain that this element of the fæces finds a constant though limited source of supply in the constant hepatic elimination of these substances.

The microscope reveals the debris of intestinal apithelium, traces of mucus, and a few lecuocytes in the fæces.

The above results of analyses compare very closely with those of Berzelius, Hammond, and Flint, Jr., and are probably as nearly accurate as the nature of the inquiry admits.

Thus it is known that a well grown and well fed man, in perfect health, usually discharges daily about 453 grains of organic solid matter in the form of fæces; and that about 283 grains, or more than half this mass, is composed of modified bile-acids, cholesterin and pigment, all derived directly from the bile.

It remains to be said that Bidder and Schmidt have incontestibly shown that about seven-eighths of the bile-acids are reabsorbed in their passage through the alimentary canal. This fact is corroborated by the enlightened collateral observations of Liebig, Lehmann, Dalton, Flint, Jr., and other distinguished observers I have not sprce to name.

In view of their chemical composition it can not be a matter of surprise that substances like glycocine or gelatine sugar, and cholic acid, should be reabsorbed from the intestines and appropriated to the purposes of nutrition. I have already shown, on the authority of Bernard, that in the lower animals the liver-sugar also is discharged into the intestines with the excrementitious elements of bile, and again reabsorbed to supply the wants of the system. The fact that these proximate elements of the bile are not found unchanged in the blood, simply places them parallel with most alimentary substances.

It is also well known that the presence of the bile in the intestines promotes the digestion and absorption of alimentary substances in general, and especially of the fats, and retards their putrefactive decomposition. It is, indeed, indispensable to life; death from simple inanition having occurred within a few weeks, notwithstanding the most ravenous appetite, and abundant supply of food, in every case where the bile is certainly known to have been wholly diverted from the alimentary canal.

The third of the four positions in controversy is stated as follows in the paper on "the liver:"

"It can not be shown that the biliverdine has any immediate agency upon the stools of any kind. In health *the color* of the dejections from the bowels is not in any degree dependent upon the presence or absence of bile. The same is true in disease, and even under the administration of chologogues."

These sentiments are repeated in various forms in the essay, with which it is a leading purpose "to substantiate the proposition that bile is not the ordinary coloring agent of the fæces."

While it is admitted as a thing known to every one that many substances

Digitized by Google

occasionally give abnormal color to the fæces, the idea and the doctrine I would oppose are well and clearly expressed in the above words from the essay, namely: "The bile is not the ordinary coloring agent of the fæces."

Certain tough, black wild fruits may give a dark appearance to the fæces. The same may be said of charcoal and other imperishable dark colored substances. Iron alone, and especially some of its compounds, act as coloring agents on the contents of the bowels. Animal pigments sometimes do the same—for example, blood, either normal or in a state of partial solution, and certain inflammatory exuditions, are well known to all physicians of medium intelligence as capable of giving various shades of color to the fæces, according to the condition and quantity of pigment present. Yet it would be a singularly reprehensible use of terms to say that any one of these, or all of them together, constitute the ordinary coloring agent of the fæces.

I showed, on the authority of Wehsarg, in my previous paper, that even diet has a sensible effect on the color of the fæces. On milk alone they are quite yellow; on mixed diet, yellowish brown; on flesh, much darker. Yet the chief cause of this difference of color is found in the fact that different kinds of diet produce different quantities of bile. "A flesh diet induces a far more abundant secretion of bile than vegetable amylaceous food."—(Lehmann Phys. Chem. vol. 1, p. 491.)

Wehsarg and others, accustomed to analyze the fæces, say the undigested alimentary substances found there are deeply colored with bile. It is not then, the color of the flesh, the mixed diet, or the milk, that gives directly its respective tint to the faeces. But rather the various shades of color are due to the proportion of bile to undigested aliment which the several kinds of diet induce. For example, flesh, in suitable quantity, produces the largest flow of bile, the smallest undigested residue, and the darkest normal fæces.

But we ought to notice the facts upon which the essay propagates this doctrine.

The first two pages of the evidence consist of quotations from Todd and Bowman, Berzelius, Dunglison, Kirke, Carpenter, and Lehmann, with comments thereon. As the views of these authors are pretty well known to the profession, and as both the quotations and the comments seem singularly wide of the mark before us, it is believed the interests of science will not suffer if we pass over this, without a word, and proceed to that which proposes to deal directly with the question at issue.

The essay says, (p. 62) "I propose now to introduce direct testimony to substantiate the proposition that *the bile is not the ordinary coloring agent of the fæces.*"

To this end it presents cases of the diarrhœa of children, with stools colored green by morbid exudation upon the intestinal mucous membrane; and cases of malignant scarlatina, with green stools, containing broken and distorted blood-corpuscles, conditions of the fæces which, it is well known, sometimes occur in these and other forms of zymotic disease. Yet, unless it is the intention to say that inflamatory products and distorted blood-corpuscles, are

Digitized by Google

the ordinary coloring agents of the fæces they need not have been introduced here.

The next item of direct testimony is the case of Dr. Ward, who says he had a "*diarrhœa for six weeks, with stools entirely free from color, during the entire period*, and yet without evidence of biliary derangement, for the urine was frequently tested."

This case was published in 1850; *when* it occurred we are not informed; it is unlike anything I remember, either in practice or in books. In every extraordinary case of disease put on record, the profession are entitled to all the circumstances. Yet in this they are all withheld. If fully given they might have shed a light upon the case that would enable us to perceive its conformity to the laws of disease. It now seems entirely anomalous. To my mind it is far from satisfactorily made out. What tests were applied to the urine, and under what circumstances were they used? If tested for any other biliary substance than pigment it was not likely to be found. If for pigment, this may have been there, but so transformed as no longer to respond to the usual tests, as shown by Frerichs. It may have been there in the form of *chromogene*, in which case it would exhibit under ordinary management no trace of its usual characteristics, as the same observer distinctly shows. (Op. cit., vol. 1, p. 100.) Or the case may have been parallel, so far as the urine is concerned, with Prof. Stokes' remarkable case, where the patient was jaundiced, the evacuations clay-colored, and the urine natural in appearance. (Diseases of the Heart and Aorta, p. 225.)

The story has about it so visible a tinge of the marvelous, is so essentially defective in that kind of conclusive circumstantial support on which alone marvelous medical stories can safely repose, is so readily explained on two or three legitimate hypotheses, any one of which would divest it of the character it now presents, that, in the estimation of common discretion, it can not bear its own weight, much less afford support to an improbable theory.

The next item of direct testimony is elicited by Dr. Inman's "question addressed to four young medical men, diligent attendants in the dead house." "Where does the brown color of the fæces begin?" The answers were uniform, "in the colon." There is abundant reason to believe that this answer is entirely correct. It has at least the support of common belief, based upon the authority of numerous able observers. To quote a single author: Flint says, "the color changes from yellow, more or less bright, which is observed in the ileum, to dark yellowish brown at this point." (Phys. of Man, vol. 2, p. 394.)

Dr. Inman further says, he "slit up from end to end the intestine of a man that died rather suddenly, and it was clear that fæcification commenced in the colon." Here Dr. Inman says not a word as to the color of the fæces, although this is known to be as variable as anything else, and is the only subject on which his testimony could be of any kind of value to the essay. Although these quotations from Dr. Inman and his friends are obviously brought forward in support of the favorite notion of the papers before us, "that the contents of the small intestine are without color until they pass

Digitized by Google

the ileo-caecal valve," there is not a word of testimony on that point from any one of them. It is true that Dr. Inman asks several questions about the color of the contents of the small intestines, thinks his own memory may be posibly treacherous on this point, declines to tell us even what he thinks he remembers, fails to answer any one of his own questions, and reports no one as answering for him. Neither is there a word of testimony touching the ordinary coloring agent of the fæces. It is obliging and considerate of the essay to state distinctly its object in bringing forward this testimony. It has thus prevented a deal of perplexing conjecture.

The essay next cites Dr. Russell's private letter to Dr. Inman, in which the writer maintains that what is called bile is often a secretion from the follicles of the colon, a statement likely to exact notice on account of its novelty, except in quarters where it is known to be erroneous. It will be noticed on a future page.

Before Dr. Inman is permitted to leave the stand, his bad angel makes him say that "he has known *many cases of jaundice with complete suppression of the bile, in which the fæces have retained their natural color.*" If this is not "the positive statement of a prominent man without proof," then Dr. Inman is not prominent. It is not only without proof, but contrary to almost or altogether uniform observation. And yet not one of these extraordinary cases is reported. Their number even is not given, nor the morbid anatomy of any one of them. We are not so much as informed how any one of them terminated, nor even told how it was ascertained that complete suppressson of bile existed. There is nothing about the statement to warrant its acceptance, even by the most credulous.

The only remaining item of direct testimony is taken from the clinical record of a case of jaundice, (Mary Duncan, age 36, just returned from India.) The clerk says, in his first report after treatment was commenced: "The stools have been well colored with bile. The lips and teeth are covered with sordes." The only other notice of the color of the fæces is twelve days later, and three days before death, in these words: "The stools are passed in bed, are green, of a dark color, and very offensive cadaveric smell."

On examination after death, "The gall ducts were found distended and filled with dark green bile. In the common duct, about half an inch from duodenal extremity, a hard gall-stone, the size of a small hazelnut, was firmly impacted, the duct both above and below being somewhat thickened and dilated. No other gall-stone could be discovered."

In this case the stools were high colored on two occasions, twelve days apart. Whether at any other period in the progress of the disease we are not informed.

The clinical clerk was either mistaken or they were colored with bile on the first of these occasions. But bile being recognised as "the ordinary coloring agent of the fæces," and seeing them high colored, it was not unnatural for a clerk, guided by transient visual observation rather than broad intelligence and careful scrutiny, to assign the color to the ordinary cause. When, however, the lips and teeth are covered with sordes, the experi-

Digitized by Google

enced physician is likely to look out for sanguineous rather than bilious coloriation of the fæces.

The color and odor of the stools on the last notice, just before death, as well as the condition of the patient, point directly to blood as the probable coloring agent at this time, expecially in view of the fact that hemorrl age is not uncommon during the latter days of jaundice from simple obstruction. (Frerichs op. cit., vol. 1, p. 130.) But the clinical clerk may have been right in the first instance, when he said "the stools are well colored with bile." A single gall-stone is rarely found in the biliary passages. It is much more common to find a larger number, reaching in some instances several thousands. It is not unusual for a gall-stone to be arrested for a time in the common duct, giving rise to jaundice and dilatation of the ducts above from accumulated bile, to be finally urged through the channel and followed by a profuse discharge of bile for a few hours, more or less, till another concretion becomes impacted. (Frerichs.)

In this case, we are informed by Prof. Bennett himself, that the common duct was both thickened and dilated between the site of the concretion and the intestine. It is thus rendered almost certain that other stones had traveled entirely through the duct before this one entered it, thus giving rise not only to jaundice but to occasional high coloration of the stools from the discharge of the pent-up bile. It is true no other gall-stones were found, but we are not informed that any others were sought till this was found, and this may have been the last of several. When all the facts and all the probabilities are duly considered—adopt any theory you will—it is difficult to find a rational motive for citing this case in proof of the proposition that "*the bile is not the ordinary coloring agent of the fæces.*"

We have now noticed every item of what the essay calls direct testimony in proof of its position, and I only desire to note the fact that strictly morbid discharges are appealed to in every instance.

"It is a generally accepted doctrine that hæmatin is the basis of all animal pigments." (Frerichs op. cit., vol. 1, p. 80.) It has been shown that a large amount of animal pigment is constantly poured into the alimentary canal by the liver, and as constantly discharged in the fæces. But in as much as the essay maintains that the color of the dejections from the bowels, in every condition, "is in no degree dependent on its presence or its absence,"—and attempts to show that what is called bile is a secretion from the intestinal follicles—it becomes necessary to determine the character of the several secretions poured out on the mucus surfaces of the alimentary canal.

I need not, however, cite authorities to show what every one knows, namely—that the salivary fluids and the gastric and paocreatic juices are colorless.

Kolliker says: "The racemose glands (Brunner's) of the alimentary canal secrete simple colorless mucus.

The tubular glands (Lieberkuhn's) secrete the intestinal juice, a clear fluid, colorless, or with a faint rose tint.

The solitary and agminated glands (Payer's patches) are closed and ductless

Digitized by Google

follicles, analagous to the tonsils and lymphatic glands." (Op. cit., vol. 2, p. 91, et. seq.)

Lehmann says the intestinal fluid is secreted by the follicles of Lieberkuhn, and of the large intestines, and is colorless. (Chem. Phys., p. 175.)

Flint says: "The simple follicles, the closed follicles and the utricular glands of the colon produce a glairy mucus." (Op. cit., vol. 2, p. 390.)

Prof Busch, of Bonn, reports (A. J. of Med. Sci., July, 1860, p. 217) an intestinal fistula in a woman. The opening was believed to be in the upper third of the small intestine, and there was no communication from the upper to the lower section of the tube. The fluids from the upper section were grass green, the intestinal secretions of the lower section were white, or of a slight rose tint.

We are thus enabled to place a proper estimate on Dr. Russell's statement, endorsed by the essay, that fresh bile in appearance is secreted by the follicles of the colon.

It is entirely certain that in the normal condition no colored secretion finds its way into the alimentary canal, except that of the liver. How is it in disease?

Frerichs, who has bestowed special attention upon the secretions both in health and in disease, shows that even when the function of the liver is suspended, pigment is eliminated only by the kidneys and sweat glands. He has, under such circumstances, always found the saliva, the pancreatic juice, and the secretions both of the small and large intestines, greyish-white and entirely free from pigment. (Op. cit., vol. 1, p. 102, et. seq.)

It is thus manifest that all the secretions found in the alimentary canal, except the bile, are free from pigment, both in health and in disease. Whenever, therefore, animal pigments are found in the fæces, they are derived from the bile, from sanguineous extravasations, or from inflammatory exudations, fibrinous or albuminous, which carry with them abundantly, wherever thrown out, the pigments present in the serum of the blood.

We are now in a condition to bestow intelligent regard upon the statements of distinguished observers respecting the coloration of human fæces. But I have space to present only a brief statement from a few sources.

In the case of the intestinal fistula long under the observation of Prof. Busch, the woman ate enormously, yet was about to perish of inanition till Prof. B. began feeding the lower section of the intestine with a great variety of articles of nutritious diet. The resulting fæces were natural in appearance and consistence, but the color was *greyish-white.*

Flint shows that the contents of the duodenum are of a bright yellow color from admixture with fresh bile, and that in passing along the canal to the caecum the color becomes dark yellowish brown, and that this color is due to the presence of the bile-pigment. (Op. cit., vol. 2, p. 131, et seq.)

Carpenter, in the last edition of his Human Physiology, (p. 378,) says: "Experiments upon the contents of the alimentary canal show that the color of the fæces is chiefly due to the presence of bile-pigment."

Flint says: "Though the color of the fæces is undoubtedly due to a trans-

Digitized by Google

formation of the coloring matter of the bile, neither the biliary salts nor the biliverdin are to be detected in the large intestines *by the ordinary tests.* The coloring matter of the fæces resembles the coloring matters which have been extracted from the blood and urine." (Op. cit., vol. 2, p. 404.)

Lehmann says, (Chem. Phys., p. 100,) "The cholepyrin in its progress through the intestines passes into a yellow pigment, which we find in the excrement."

"The bile-pigment gradually undergoes, in the alimentary canal, the same changes which we have noticed in the putrefaction of the bile. The yellow color of the excrements depends upon entirely altered bile-pigment." (Op. cit., p. 178.)

"Unaltered constituents of the bile are found only when the contents pass rapidly through the intestines; the excrements are free from bile when the biliary duct is closed; they are of a dirty whitish-grey color." (Op. cit., p. 181.)

Lehmann, Pettenkofer, and others concur in the statement that "a large quantity of undecomposed bile is usually found in the fæces after the use of purgatives, and in certain forms of diarrhœa." (Phys. Chem., vol. 1, p. 534.)

"The stools are of a bright yellow color, when the bile flows only sparingly into the intestine." (Op. cit. vol. 1, p. 536.)

But the clinical records of Frerichs afford more conclusive evidence that the color of the fæces gives an accurate insight into the condition of the secretory function of the liver than any statement of the fact is liable to show. He says: "Of great importance in a practical sense are the changes of color which the fæces are want to exhibit in jaundice, because from their character we can most easily draw a conclusion as to the more or less complete exclusion of bile from the intestine. When the obstruction of the biliary ducts is complete, every trace of bile-pigment disappears from the stools; they assume an ash or clay color, which only varies according to the nature of the food." (Op. cit., vol. 1, p. 111.)

From what has been presented, I think it may be safely concluded that the intelligent physician knows that bile-pigment is the chief coloring matter of human fæces. In the case of normal fæces, if he knows the character of the diet, he is able to estimate very closely any modification in the color derived from this source, and hence to judge with great accuracy of the functional condition of the liver by the color of the fæces.

In the case of morbid fæces more discrimination is demanded, for new complications arise. They may be colored by bile alone, by blood alone, by inflammatory exudations alone, by medicine alone, by diet alone, or by several or all of these substances together. Yet in the most complicated case that may arise, he is in possession of knowledge and instrumentalities that enable him to determine with an approach to accuracy the nature and source of the several coloring agents present. This knowledge is of inestimable value, and may not be ignored or set aside without imminent peril to the sick.

But the essay has reached a new "generality," remarkable alike for its novelty and its "breadth," namely: "That there is no bile in mercurial

Digitized by Google

stools." (P. 67.) And to illustrate the "rigorous scrutiny" of its logic it is only necessary to know that this conclusion is reached, when the essay very well knows that Simon found 21.4 per cent. of the organic principles of bile in the fæces from the operation of a large dose of calomel.

It knows that "almost unchanged bile is present in calomel stools; that both the bile-acids and the pigment may be recognised with facility in such stools." (Leh. Phys. Chem., vol. 1., p. 535.)

It knows "that more unaltered bile than usual is found in the grass-green stools that follow the use of calomel." (Leh. Chem. Phys., p. 182.) It knows that "in the fæcal discharges which result from the action of mercurials, large quantities of biliary matter may be detected very little changed." (Carpenter's Hum. Phys., ed. of 1862, p. 131.)

It knows that it would be an easy task to bring forward other evidence to this effect, equally direct and unequivocal, derived, like this, from precise and accurate chemical analysis, and clothed with the full authority of this almost exact science. And we both know that facts like these would be no match for its logic, no restraint on its generalities, no impediment to its conclusions.

The essay recounts several sources, real and imaginary, of coloration of excrement, and says, "they are sufficient to warrant the denial of any agency in the bile in giving color to mercurial fæces." (P. 68.) It would be difficult to construct a more striking example of entirely "loose deduction."

The essay further maintains that it is the subsulphide of mercury that gives the high color to mercurial stools.

It is possible that this substance may sometimes modify or even intensify the color of the fæces to an appreciable extent. But to set aside altogether the coloring agency of an abundant, soluble, all-pervading animal pigment, constantly poured into the intestine, and as constantly discharged in the fæces in some of its numerous familiar hues, and substitute for it a few grains of this permanent, insoluble, black powder, as though it were capable of imparting to a large amount of colorless excrement the various shades of yellow, brown and green so commonly witnessed after the use of mercury, requires an extreme capacity in the way both of credulity and incredulity, scarcely reconcilable with ordinary types of psychological conformation.

But other difficulties embarrass this theory. If subsulphide of mercury gives the color to mercurial stools, it should be more constant and more uniform in its effects than the color of these stools would indicate.

I have found the stools scant and pale, indicating to my mind the deficient secretion of bile; have given a little mercury and found them copious and high colored; not always nor even usually grass-green, but yellow, brown or green, and sometimes, as I believe, all these colors have been pretty well represented in twenty-four hours. At other times, under like circumstances, I have given mercury, repeated and increased the dose, without being able to perceive any marked change in the color of the stools, even when its purgative effect was sufficiently manifest. I have reason to believe the experience of others is very similar to my own.

Digitized by Google

Lehmann says the subsulphide of mercury may always be found in calomel stools, whether they be green, black, or natural in color. That frequently the administration of calomel is not followed by green stools, and that this is often the case in typhus. (Phys. Chem., vol. 1, p. 535, et seq.) I believe it is often the case in many acute diseases that like typhus greatly impair both the digestive and biliary functions, and simply because under such circumstances it often fails to secure a free secretion of bile.

Since this subject has been under discussion I have had a little experience that seemed worth recording.

Allow me to present two cases:

In 1865, Orestes K., age about 18, farmer, of good constitution, had been dull, with some headache, dizziness, slow bowels, scant pale stools, and poor appetite for several days, though he kept at work. He finally tumbled over in the field and was carried in. His faculties were much impaired and soon became obliterated. He remained without speech or voluntary motion for more than two days and nights. The temperature was nearly normal, pulse rather feeble, respiration sluggish, tongue furred, yellowish, pupils normal.

The season of the year (Aug. 17), the locality (a low river bottom), the symptoms, and I know not how much of preconception, led to the liberal use of calomel and quinine.

The first manifestation of voluntary power was followed in a few minutes by a very large evacuation from the bowels, of tar-like consistence and dark brown color. This was soon followed by others, of less consistence and brighter color, till an incredible amount of what was deemed almost unchanged bile was discharged, when the young man's faculties were found to be restored. Recovery was rapid and complete.

Thomas S., age about 76, after somewhat protracted inconvenience from flatulence, indigestion, acidity of stomach, and occasional diarrhea, observed, toward the last of summer, 1867, that his stools were remarkably light colored; taking this as an indication that his liver was inactive, he procured and used Mandrake pills. But his sufferings seemed to be increased, and no change was affected in the color of his stools, so he gave up the pills. Soon after he consulted Dr. Elias Fisher, who, finding no clear indication of mechanical obstruction to the excretion of bile, and recognising its absence from the fæces, gave him calomel and Dover's powder in small doses, to be taken three times a day. This course of treatment was abandoned after a few days, because it rather increased the trouble, while it produced no change in the color of the stools.

There were still indigestion, flatulence, light colored stools, high colored urine, and at this time a distinctly jaundiced hue of the skin. Dr. Fisher, having left the country on a protracted visit, he took nothing for some time, and then fell into the hands of Dr. James F. Hibberd, who had charge of the case for several weeks. The progress continuing to be downward, the patient came under my care on the 22d of October. At this time he was thoroughly jaundiced, suffered greatly from itching and pricking of the skin, was feeble, emaciated, without digestive power; had frequent sickness and

Digitized by Google

burning at the stomach, slow bowels, with tenacious, doughy, light colored stools, and urine dark and thick. The liver appeared normal in size and position, the gall-bladder was recognised as a pyriform tumor, extending below the crest of the ilium. No other tumor was detected. The patient informed me that from the time the stools were first observed to be clay-colored he had noticed with anxiety every evacuation, and that they had in every instance been about the color of freshly made putty, and mostly near that consistence. The urine had been high colored throughout, but not equally so at all times.

Having no doubt about the existence of mechanical obstruction, no medicine was used beyond an occasional effervescing draught and a little morphia. The diet was various, but mostly fluid—always gave rise to inconvenience, and was wholly given up many days before death, which occurred from inanition on the 10th of November. The fæces remained putty colored throughout, till the last night but one of his life, when, after an enema, he passed a small quantity of colored fluid, observed only by his wife, who thought it stained the sheet like blood; it was, however, washed out before morning, and its character never positively determined.

The circulation was regular, but slow, and the intellect clear throughout.

Several of our physicians, including Drs. Fisher, Hibberd and myself, witnessed the examination of the body, six or eight hours after death, which was mainly confined to determining the cause of obstruction.

The head of the pancreas was found enlarged, indurated, and surrounding the common duct near its entrance into the duodenum. The pressure was such as to obstruct the passage of both the bile and the pancreatic juice. The gall-bladder was full of dark, thick, tenacious bile, estimated at 8 to 10 ounces. The pancreatic duct was perfectly distended with a thick, ropy, colorless fluid.

The first of these cases I saw in consultation with two other physicians on the second day of illness, and remained with the patient until his faculties were fully restored. Active and judicious measures, local and general, had been used for many hours to restore the sensibility of the patient, but were abandoned before my arrival, in the belief that thorough functional activity of the liver, the free elimination of the excrementitious elements of bile from the blood, afforded the chief hope for the patient.

This view of the case was concurred in, and the treatment continued to the end indicated in the report.

The evacuations in this case may justly be considered as calomel stools. Are we to believe they contained no bile? Are we to believe that the elimination of bile was no greater on the day sensibility was restored than it had been for each of the four preceding days? The discharges were large and high colored, and the three or four I saw presented decided diversity in color. They were certainly not colored with either blood, inflammatory exudations or alimentary substances. Are we to believe that subsulphide of mercury was the coloring agent? If not, then I think it must have been bile. If the subsulphide colored these stools, why did it fail in the second case? For

Digitized by Google

although Dr. Fisher gave mercury in smaller doses, I believe it was kept up longer, and the patient, a man of good understanding and intensely alive to the color of his stools, was never able to perceive that his medicines or his food produced any change whatever in the color of his fæces.

The fourth and last of the propositions in controversy is stated in the paper on "The Liver," quoted in the paper on "Cholagogues," and fully reaffirmed in the "Essay on Bile." It amounts to an emphatic declaration that we have not a drug nor combination of drugs possessing the cholagogue property.

This proposition is more fully considered in my previous paper than any other, and although the facts which afford support to the opposite doctrine are only partially and imperfectly presented in that paper, I have neither the space nor the disposition to present them here.

The doctrine that certain drugs possess cholagogue powers rests on evidence as ample and conclusive as that which supports most therapeutic doctrines. The objections urged against it are more specious than cogent, and apply with equal force to many classes of remedial agents, to anodynes, ecbolics, tonics, diuretics, and others, which all rest on a similar and equally assailable basis.

Direct experiments, undertaken with a view to test the powers of reputed cholagogues, have been made only on healthy and well-fed animals—a condition wherein the accumulation of excrementitious bile is impossible, and wherein the use of calomel is known to interrupt appetite, digestion and absorption—processes which afford the measure of recrementitious bile secreted by the healthy liver.

In view of these facts it is manifest that the frequent and persevering use of this drug, however powerfully it may stimulate the function of the liver, can not fail to reduce the flow of organic bile-solids below the normal standard. The most that could be expected is temporary augmentation of the watery portion of this secretion, and even the essay shows, on high authority that precisely this effect follows the use of calomel under these circumstances, (p. 67.) Yet it is sufficiently manifest that a medicine, capable of stimulating the liver to increased secretion, when there is nothing to eliminate but an innutritious non-offensive fluid, would augment the flow of organic bile-solids, were the requisite pabulum present in usual abundance.

Apply the same practice to the kidneys and you will witness a like result. Take a man in perfect health, whose blood contains scarcely an appreciable quantity of urea, cut off the supply of nitrogenous food, keep him quiet in bed, give him squill, parsley, juniper, colchicum, digitales, and the diuretic reputation of each will be ruined. The excretion of organic solids will fall below the normal standard right under the use of your diuretics. You may by active stimulation of the kidneys increase for a time the flow of water, but you will do well to get away half as much urea as would be eliminated under full animal diet without the use of diuretics. The reason of this failure is too obvious to require statement, and applies with equal force to the failure of mercury in the recorded trials of its cholagogue power on healthy and

Digitized by Google

well-fed dogs. Yet this is the precise line of observation that has led the "Essay" and its friends to repudiate this whole class of remedies.

On the other hand, take a case in which appetite, digestion and absorption have already been uspended, the blood loaded with ten times the normal quantity of urea, the connective tissue and closed cavities filled with serum similarly saturated, because the kidneys have been doing but a tenth part of their appropriate work, and these agents, under judicious administration, will fully regain their diuretic standing. The same is eminently true of cholagogues.

The essay notices a series of observations in which C. Hanfield Jones administered a number of reputed cholagogues to animals, killing them soon after to determine their effects on the liver. It makes out to get over, without any kind of notice, the cases where some of these drugs caused a great flow of bile per anum, and where others caused a similar flow of bile into the intestine, before the animals were killed, producing in both instances pale livers, with cells free from coloring matter.

But deeming it had found a fact to its purpose, it quotes from the same series of observations half a sentence, to-wit: "Mercurials produced a great sanguineous condition of the liver," omitting the other half to-wit: "and increased the yellow matter in the cells." From this half sentence it deduces the following conclusion: "Mercurials, instead of increasing the functional activity of the biliary apparatus, as ordinarily administered, actually produce a sanguineous congestion and diminish secretion," (p. 66.) There can be no doubt that the essay is entirely candid, nor that it is perfectly captivated by its own reasoning here as in other instances—nevertheless physiologists, men like Bernard, Flint, Virchow and Jones, interpret the temporary congestions of a healthy gland somewhat differently, whether they be induced by the ingestion of either food or medicine, by the injection of the latter into the blood vessels, or by the galvanization of its vaso-motor nerves. They show that the glands are shrunken, pale and bloodless during periods of functional repose, and that the first manifest step toward abundant secretion is sanguineous determination, active congestion, the gland becoming turgid with blood, which may be readily induced and carried to its consummation (abundant secretion) by any one of these methods.

It would be difficult to imagine evidence tending more directly to establish the cholagogue action of drugs than these observations of C. H. Jones, and it is well known that few observers are entitled to a higher grade of confidence, especially in matters pertaining to the structure and function of the glands.

I can not take leave of the essay without saying that its careful perusal has afforded a continual feast. Its obvious natural affinity with "inquiring philosphical minds," its utter horror and intolerance of credulity; its eager demand for rigorous demonstration, its intuitive insight and discrimination of the bearing and credibility of testimony, and, above all, the peerless staple of its logic, impart a raciness to the entertainment of unmatched rarity and significance.

Digitized by Google

While it is obvious that a knowledge of the medicinal properties of drugs is to be derived from clinical observation, it is equally certain that success in this department of medical study depends upon accurate knowledge of disease. This, in its turn, requires a clear comprehension of physiology. Otherwise we have no fixed basis from which to calculate departures, and it is preposterous to suppose that we may acquire accurate knowledge of the abnormal movements of disease, while ignorant of the functions and phenomena of a healthy life. But our apprehension of physiology must remain essentially incomplete and unsatisfactory until it rests upon a thorough knowledge of the various organs and structures of the body.

In modern times the natural sciences have sprung up and overshadowed the patrimonial domain of the physician, wresting his attention from the stereotyped pursuits of his ancestors, and fixing it on means and instrumentalities which promise to reveal the nature and laws of both health and disease, and to show more distinctly than hitherto the methods of cure. Assurance of the progressive fulfillment of this promise may be read as we run, in every department of medical knowledge. Many symptoms of disease, once incomprehensible phenomena, have thus acquired the value of infallible signs of well known disorders.

Thus it is that in the focal light of a circle of progressive sciences revision of medicine is going forward. It is no partial fanatical spasm of the age, but a movement destined to reach and reconstruct every department of medicine—to afford verification or refutation for every doctrine of the science—to run abreast with the progress of knowledge, and commensurate with the sands of time. And though the Temple of Æsculapius be defended by Foggies, with a reverence due the Fame of a Divinity—though it be assailed by modern snobs who would raze its foundation stones, to occupy the place with monumental bronze, symbolic of personal vanity—heedless of either, unmoved by either, the work will go steadily on, for it is in the hands of far other men, fitted by nature and culture for this highest of human pursuits.

At the close of the reading the following remarks were made.

Dr. Hibberd:

I have a few words to offer in explanation in regard to Dr. Kersey's paper. I promise not to be lengthy in remarks, for I apprehend the Society is becoming somewhat tired of the discussion. In referring, in my last paper, to Carpenter as authority, there was an error made as to the page. However, the error is of a less material nature than at first might be supposed, for I have found it almost impossible for Dr. Kersey and I to read the same page of a book and construe the argument in the same way.

I think I shall have to ask the pardon of the Society for introducing the subject. I think the Society should pass a resolution punishing any one who shall mention bile or liver for the next five years! I yield to the gentleman whatever credit may accrue from having the last word.

Digitized by Google

REPORT ON CHOLERA.

BY GEORGE SUTTON, M. D., AURORA, IND.

As I have not been able to hear of a case of Asiatic Cholera occurring within the State of Indiana during the year 1867, I have no facts to present of the prevalence of this epidemic within our State during the last year; but feeling desirous to discharge the duties assigned me at the last meeting of our Society, I would direct your attention to a brief review of the principal facts developed by the recent introduction of cholera on our continent, to show how far they sustain the theory that the diffusion of this disease depends upon human agency, and also ask your attention to a brief discussion of some of the conclusions presented to this Society in my last report. The correctness of the views presented to the Indiana State Medical Society in the spring of 1853, viz: that cholera poison emanates from the evacuations, and that the disease may be spread over the country by persons laboring under a form of diarrhea, have borne the test of time, and are being sustained by the observations of physicians in all parts of the world; and the view also presented at that time that cholera occasionally assumes the form of dysentery, we feel confident will be yet equally sustained by facts, and become the only rational explanation why these diseases occasionally become so intimately associated.

Since the appearance of cholera at New York in the spring of 1866, and its subsequent prevalence over the country, a remarkable change has taken place in professional opinion in reference to the laws by which the disease is diffused over the globe. Two years ago it is probable that a large majority of the medical profession believed that the spread of cholera depended upon an unknown "epidemic constitution," and it was then to some extent unpopular to advocate any other view. But from the decisions of the Cholera Conference at Constantinople, and the accumulation of facts presented by the recent appearance of cholera in our own country, this theory is rapidly passing away, and will probably become entirely abandoned as the disease becomes more thoroughly understood. The different visitations of cholera to

Digitized by Google

our continent, associated each time with the arrival of vessels on which cholera had been prevailing at sea—appearing at one point only on the eastern boundary of the continent, and that the one at which these vessels landed, and immediately after the landing of their passengers, as was seen at Quebec in the year 1832, after the arrival of the emigrant vessel on which a number of deaths from cholera had occurred. Its reappearance at New Orleans in the winter of 1849, on the arrival of the ship Swanton with cholera on board, and its appearance at New York in the spring of 1866 immediately after the arrival of the vessels England and Virginia, on which the disease had proven so fatal, and continued to prevail equally as fatal while lying in quarantine, are facts familiar to all, and leads irresistably to the conviction, when viewed with additional facts that occurred, that to those points was introduced a poison by these vessels which subsequently spread over the country. The emigrants in the ships England and Virginia came from that part of Europe in which cholera was prevailing. The disease appeared on board these vessels while at sea, prevailing only amongst those who were in the steerage, or associated together; traveling with these passengers through different degrees of latitude and longitude, after they had left the supposed sphere of "epidemic influence;" continuing with these passengers on their arrival at our shores; still continuing to prevail in a malignant form amongst them for several weeks, while lying in quarantine near two cities containing more than a million of inhabitants, many of whom, reduced by poverty, must have been as predisposed to disease as some of the passengers that were stricken down, while during that time these cities continued not only free from the epidemic but any of the premonitory symptoms indicating its approach—appearing at one of these cities after the landing of these passengers, or at least after there had been communication between these vessels and the city—the first point, and at that time the only place upon the continent of America—its appearance at a time of universal good health throughout the land, and when there were no premonitory symptoms indicating the approach of an epidemic, showing that the cause which produced it was not general but must have been local. Afterwards appearing in different cities having daily communication with infected points, while the country surrounding these cities was for a time free from the disease, and appearing in a malignant form wherever causes favored the accumulation of infection, as in certain localities in our cities, or on board our steamers when crowded with passengers, as in the conveyance of the 36th colored infantry on the Mississippi in the spring of 1866, one hundred and thirty-nine of whom died; also as seen in the troops conveyed by the San Salvador from an infected port; also its introduction into the island of Guadaloupe by infected clothing, and then spreading in a most malignant form amongst the inhabitants, destroying 10,850 out of a population of 149,107, while the neighboring islands and the continent of America were free from the disease; also the testimony in the Surgeon General's Report on Cholera for the year 1866, are facts, in connection with the vast amount of similar evidence that has been published before, which seems to

Digitized by Google

me must be conclusive that cholera depends upon an organic poison, which is reproduced within the human system and diffused by human agency.

To regard the cholera germ as having been introduced into our country by the passengers of the vessels we have named, appears to me the only rational way in which we can explain the first appearance of cholera, and the subsequent prevalence of the disease at these points. That the cholera germ could have been introduced to our inhabitants, even had a much more rigid system of quarantine been adopted than was, I think scarcely admits of a doubt. We know that a large number of passengers were exposed to the infection, and when permitted to come on shore is it not more than probable that some of them still retained a portion of the infection within their systems, which may afterwards have produced a mild form of cholera, or even at that time some of the passengers may have had cholerine so mild that it was almost impossible for medical inspection to have detected it, even the persons themselves scarcely being aware that they were unwell, or many other ways in which the cholera germ may have been conveyed on shore. It is well known that clothing may convey cholera poison, as was seen in its introduction into the island of Guadaloupe, and why may not our ragged *paper money* also be occasionally a vehicle. I have seen persons laboring under cholera hand money to their attendants to procure medicines, and I have also seen nurses whose hands were moist with the secretions after rubbing the patient during cramps, handling money required in purchasing necessaries for the sick, and certainly there is nothing unreasonable in supposing that our paper money may occasionally be made a vehicle to convey infection.

Then if it required human agency to convey the cholera poison across the ocean and introduce it upon our continent—a conclusion which we think the facts now clearly warrant—it certainly must require the same agency to spread it over the country. It follows then, as a necessary consequence, that the diarrhea and a form of dysentery which occasionally accompany cholera are but modifications of the same disease, arising from the same cause, and diffused by the same agency; and I think it can be shown how the poison germ may produce the diarrhea, the dysentery, and the worst forms of cholera.

Regarding it, then, as a fact that cholera and its different modifications arise from an organic poison which is diffused over the globe by human agency, we will now examine for a few moments the question, in what part of the system is this poison germ redeveloped? and in doing so we may ask, is cholera a true zymotic disease, in which the poison is redeveloped in the blood? or, is it cryptogamia, which originated in India, and has spread through every degree of latitude and longitude? or, does it depend upon an abnormal animal cell or morbid secretion, only redeveloped within the mucous membranes?

That cholera is not a zymotic disease, in which the poison germ is redeveloped within the blood, appears to me conclusive. Among the many reasons that may be advanced to sustain this conclusion, we present the following: That it is a well known fact that the blood does not generally present the

Digitized by Google

appearance of disease prior to an attack of cholera; that the disease is too much under the influence of the nervous system and exciting causes for a blood disease; that in zymotic diseases which arise from infection there is generally a definite period (the period of incubation), in which the blood seems to be undergoing a change, or the poison redeveloping itself, and the attack is generally preceded by premonitory symptoms indicating the approach of the disease; while an attack of cholera at the time of apparently perfect health may suddenly be brought on without premonitory symptoms, at any time varying from one hour to twenty days after exposure to the infection, by a variety of causes, such as whatever produces a shock to the nervous system; by mental emotions; by sudden exposure to cold; by fatigue, and particularly by irritation of the gastro-intestinal nerves, and whatever favors a congestive form of diarrhea, or a determination of blood to the mucous membrance of the alimentary canal. Is it possible that a zymotic or blood disease could be so suddenly developed by these well known exciting causes of cholera. If cholera is a zymotic disease, why should eating indigestible food, irritating the gastro-intestinal nerves, bring on suddenly an attack? It is a well known fact that persons may be surrounded by cholera infection, constantly breathing the atmosphere that is producing the disease in others, and yet enjoy good health until, by some act of imprudence, such as overloading the stomach with indigestible food, or, as I have seen, by taking an active cathartic, the disease is suddenly produced. Could an active cathartic or overloading the stomach suddenly develop an infectious zymotic disease, in which the poison is thrown off? The disease may be cured by proper remedies and reproduced a number of times by exciting causes, although there is an abundance of evidence to show that in time the susceptibility to cholera is in a great degree removed by frequent exposure to the infection, still we know that an attack of cholera may be brought on at any time when infection is within the system by exciting causes. It may be arrested, reproduced, and arrested again at indefinite periods. This fact, that an attack of cholera may be arrested by proper treatment, that it does not have to run its course like well marked blood diseases, that it may suddenly be produced at an indefinite period, varying from one hour to twenty days after exposure to the infection, and the very rapid recovery even from severe attacks, which frequently take place, are evidences which appear to me conclusive that the disease depends upon the development of poison during the time of an attack, and not upon an abnormal change going on in the blood. How could those remedies which allay gastro-intestinal irritation, irritation of the gastro-intestinal nerves, the remedies best adapted to cure an attack of cholera, arrest the progress of a blood disease? It is a well known fact that sudden shocks to the nervous system, as I have already mentioned, will bring on an attack of cholera. How could mental emotions suddenly develop a blood disease? In illustratation, I will mention two instances that came under my observation. During the prevalence of cholera in Aurora we had a severe thunder storm. A Mrs. Lawford, who had been very efficient in attending on the sick, was suddenly startled by a flash of lightning which struck a

Digitized by Google

house near the one in which she resided. The report of the thunder was so loud and instantaneous after the flash that she thought her own house was struck; she sprung out of bed, as it was after night, and was instantly seized with vomiting, followed shortly after by cramps and profuse watery evacuations, and died after only a few hours illness. On the evening of the fourth of July, 1854, during the prevalence of cholera in our city, Mr. S———, an old citizen and one of our well known merchants, procured some bunches of shooting crackers, and also other fire works, to amuse his children; after they were ignited they flew in different directions, and some of them exploded near the feet of one of his little girls, a child about ten years old, who was so much frightened that she fainted, and was immediately attacked with vomiting, followed by all the symptoms of cholera in its most malignant form, and died after about five hours' illness. Is it possible for such shocks of the nervous system to develop and bring about so rapidly a blood disease? Or, are we to regard the occurrence of these cases at those times as merely coincidences? But is it not an admitted fact, in accordance with the experience of physicians, that mental emotions and whatever produces a sudden and powerful derangement of the nervous system may become an exciting cause, and suddenly bring on an attack of cholera? The above we present as some of the reasons that cholera is not a true zymotic or blood disease, in which the poison germ is reproduced within the blood.

Does cholera depend, then, upon the rapid development of poisonous cryptogamia within a locality, or on or within the mucous membranes? To those who advocate this last view it may be asked, why should taking an active cathartic, irritating the gastro-intestinal nerves, eating indigestible food, sudden shocks to the nervous system, and other well known exciting causes of cholera, give rise to the development of this poison, or produce the growth of cryptogamia? Arrest the diarrhea at the commencement of an attack of cholera, and in nine cases out of ten it arrests the progress of the disease. Will this well known fact harmonize with the theory that the presence of cryptogamia within the alimentary canal is the cause of cholera? Is it not an anomaly that by retaining the poisonous cryptogamia where they can be developed and accumulate, you prevent them from producing their abnormal effects? Or why should this plant flourish so well at one time in an animal body and not at another, and why should a community ever become free from the disease? Is there any known law governing the vegetable world which would cause a species to suddenly disappear from a country, under every variety of temperature and hygometric condition of the atmosphere, after flourishing in the most luxuriant manner, and after scattering its seed over a whole continent? Would not favorable conditions of temperature and moisture have a tendency to reproduce the cryptogamia when once the germs were introduced into our country? Would not similar conditions always produce similar effects in the vegetable world? But similar atmospheric conditions do not produce cholera. If the supposed cholera cryptogamia are developed in the rice fields of India or along the Ganges, why should they not be developed in the rice fields of the South, or along the banks of the

Digitized by Google

Mississippi, after the germ has been introduced and after flourishing luxuriantly, and become permanent in our country? Is not the transient duration of cholera in a locality, and its complete disappearance from a country contrary to the laws that govern the vegetable kingdom? The sudden accumulation of cholera poison, and the violence with which it attacks and spreads among the inhabitants of a city under different conditions of the atmosphere, and as suddenly disappearing without any *apparent atmospheric cause*, are so contrary to all known laws which govern the vegetable world that it seems to me impossible to make this theory harmonise with the facts presented by the spread and disappearance of cholera.

Then as the cryptogamic theory of the cause of cholera can not, I think, be reconciled with the facts presented by this disease, and as facts do not warrant the conclusion that cholera poison is reproduced within the blood, we will next examine a theory which regards the poison as the product of a tissue—a poison emanating from a mucous membrane and producing its poisonous effects on the organic nervous system. The symptoms of cholera present clearly the evidences of nerve poisoning, and the gastro-intestinal nerves must certainly be the first impressed by the poison to produce the local congestion, the relaxed condition of capillaries, the serous diarrhea, and other symptoms which accompany an attack of cholera. We see at once, then, how this local nerve poisoning produces hyperemia of the mucous membrane by loss of power of its capillaries, and consequently the congested condition of this tissue favors the development of the poison germ which increases the local nerve poisoning. From this view we see how those who have a healthy and vigorous organic nervous system are likely to escape the disease, while whatever deranges this system or throws it off its healthy balance may enable cholera poison to instantly produce its abnormal effects. We have already seen that the evidence is, that this poison is not produced within the blood as in a true zymotic disease, consequently it must be local in its origin—developed within the tissue, not the blood. This view is supported by the facts that the disease may be arrested in its early stages by proper remedies, reproduced by exciting causes, arrested again at any time when cholera is prevailing, or when cholera poison is within the blood, so long as the nervous system is susceptible to its influence.

This poison is evidently introduced into the blood through the lungs —a fact, I think, now generally admitted by the profession—it circulates with the blood, the blood being the carrier, and in a large majority of cases is eliminated without producing any serious impression, but its presence in the blood, circulating through the mucous tissue, has a tendency to convert normal into abnormal action, producing predisposition to disease, which, when once produced from any exciting cause, is first felt upon the organic nervous system, producing innervation and a relaxed condition of the capillaries, particularly the capillaries of the alimentary canal. This dilated condition of the capillaries, hyperæmia or congestion of the mucous membrane, produced at first by local nerve poisoning, favors the accumulation of poison in the tissue in which it can be reproduced, and we see then that whatever

Digitized by Google

produces this hyperæmia of the mucous membrane *favors* the nerve poisoning, and the development of the poison germ, or an attack of cholera, such as imprudence in diet, gastro-internal irritation, sudden exposure to cold, etc., etc., if we restore at the commencement of an attack of cholera the tone of the nervous system and the mucous membrane to its healthy action, we arrest the progress of the disease, and *prevent the development of the poison germ.* It appears that a healthy condition of the capillaries does not favor the exosmosis or elimination of the poison germs through the vessels of the gastro-intestinal mucous membrane; but when the vital power of these vessels becomes deranged, and the capillaries expanded by congestion, then the poison germs pass rapidly into the tissue, as we know that effusions take place when the vessels are engorged either from obstructed circulation or inflammation, and it is during this state of accumulation that the reproduction of the poison germ takes place, giving rise to the symptoms of cholera. This view explains how cholera is so much under the influence of exciting causes.

It is not the intention to enter into a discussion as to the nature of the cholera germ; but whether we regard this poison as an abnormal animal compound capable of reproducing itself by uniting with the secretions of the mucous membrane, or whether we regard it as an abnormal cell which can be reproduced only within this tissue, either theory will harmonize with the views here advanced. It seems to me, however, that there are less objections to the theory which regards this poison as originating in an abnormal animal cell than to any other. We know that abnormal cells do produce diseases and are capable of reproducing themselves, as the pus cells in purulent ophthalmia, and we can see no reason why abnormal cells may not be rapidly developed in certain conditions of the mucous membrane, like mucous cells are, and produce from the blood poisonous compounds, as different vegetable cells in different species of the same genus, or even in different parts of the same plant, secrete from the same elements deadly poison and nutritious food. Cells are well known to have an independent life, and there are some of them capable of retaining their excitability long after they have been separated from the body. Carpenter tells us that "The isolated epithelium cells have been seen to swim about actively in water, by the agency of their cilia, for some hours after they have been detached from the mucous surface of the nose; and the ciliary movement has been seen fifteen days after death in the body of a tortoise, in which putrefaction was far advanced." Virchow also states that "If we take a single ciliated cell, and after entirely isolating it from the body, allow it to swim about, and wait until a state of complete repose has declared itself, we can again call forth the peculiar movements of its cilia by adding a small quantity of potash or soda to the fluid;" also that "the ciliary movement is maintained in the dead body at a time when other parts have already began to putrefy. The ciliated epithelium of the frontal sinuses and the trachea is found in human corpses in a state of perfect excitability thirty-six to forty-eight hours after death, when every trace of irritability has long vanished from the remainder of the body;" and there is certainly nothing unreasonable in supposing that the germs—as advanced by

Digitized by Google

Beal,—of abnormal cells, retaining their power of re-development, may pass from one body to another, and under favorable circumstances become re-developed. We do not think that the facts warrant the conclusion that they must be swallowed, as advocated by the late Dr. John Snow. These views differ from those advanced by him, by showing how the poison may act on the mucous membrane by being introduced through the atmosphere to the blood.

To present more clearly the views which I think will now best harmonise with the facts as seen in the progress and development of cholera, we will suppose this poison to originate in an abnormal cell, and for the sake of illustration we will say an abnormal epithelial cell, the germ or nucleus of which is thrown off during an attack of cholera, with the mucous cells and epithelial cells which are so abundantly found in the rice water discharges; then this germ, under the influence of heat and moisture, rises into the atmosphere as infection, and is introduced into the blood through the respiratory organs. Now we know that epithelial cells and mucous cells are developed only in certain tissues. We also know that it is a well known physiological law that different substances have a tendency to excite and act upon different organs—a natural selection or attraction—as we see in the modus operandi of medicines: cantharides acting upon the urinary organs, whether applied to the skin or introduced into the stomach; opium and narcotics upon the nervous system, no matter how introduced into the blood; emetics and cathartics on the stomach and alimentary canal, even if injected into the veins, etc., etc.; showing the elective affinity of substances for tissues; and there is reason to believe that different contagious, or infectious poison germs, are governed by similar laws, as we see in the poison of hydrophobia, in parotitis, in whooping cough, etc. We know that in contagious ophthalmia, in gonorrhea, poison germs emanate from certain mucous tissues and can only be reproduced on or within those tissues. Can the poison germ of contagious ophthalmia, (even if it is, as some have regarded it, a pus cell; if so it must be a specific form of pus cell,) be reproduced from any other tissue than the conjunctiva, or the poison of hydrophobia from any other part of the system than the mucous membrane of the pharynx or salivary glands? It is in these tissues that these poison germs find a proper condition, viz: arrangement of ultimate structure (perhaps a basement membrane) favorable for their re-development. We conceive, then, that as different parts of the system have an elective eliminating power, or an affinity over substances introduced into the blood; that certain poison germs, emanating from mucous membranes, when introduced into the circulation would not only be more likely to be eliminated from the circulation through the mucous membrane, but would act on and be developed in this tissue, and produce a more abnormal influence over the nerves of this tissue than over any other nerves, as we see a specific poison in hydrophobia, in whooping cough, etc., manifesting itself upon the nerves of certain tissues from which the poison germ seems to be redeveloped. The capillary circulation being under the influence of the nervous system, as we know, its vessels can be expanded or contracted by nervous influence, and we

Digitized by Google

conceive it to be only in an abnormal condition of the nerves of the mucous membrane and its capillaries, a condition similar to the one in which the germ was first produced, that the cholera poison or cell can be redeveloped and produce its specific effects; while a normal condition of the mucous membrane, as we have seen, and its nerves, will generally resist the development of the cholera germ. Whatever we may regard the poison germ to be, there is reason to believe that it can not be reproduced except in an abnormal or congested state of the mucous membrane, and a favorable condition of this tissue is produced by the poisoning of the nervous system. Congestion of the mucous membrane and increased sensibility of its nerves are among the first symptoms of cholera, and whatever increases the sensibility of these nerves favors the development of the disease. Whether the poison germs are redeveloped within the epithelial cells, or from or within the basement membrane, we know that they have a tendency to produce the destruction of the epithelial cells, which are so abundantly found in the discharges, and the poisonous effect is generally in proportion to the quantity circulating through the gastro-intestinal mucous membrane; just as we find the effect of poisons upon the nervous system is always in proportion to quantity when the nervous system is susceptible to their influence.

Regarding, then, cholera poison as being introduced into the blood through the respiratory organs; circulating in the blood, but not at once producing disease of the blood; having a tendency to be re-produced from or within the mucous membranes of the alimentary canal; reproduced in small quantities during a mild attack, increasing in quantity as the attack progresses, and in large quantities when the disease assumes a malignant form, or in other words the quantity depending upon the extent of surface from which it is produced; we see how hyperæmia of this mucous membrane—or whatever produces a nervous impression, which causes a determination of blood to the alimentary canal or a congestive form of diarrhea, or a relaxed or expanded condition of its capillaries—would favor an attack of cholera by producing an accumulation of poison within the tissue in which it poisons the nervous system; and when the attack is once produced then we have re-development of the poison germ favoring this congestive form of diarrhea with its relaxed condition of the capillaries, producing its profuse serous discharges, thickening of the blood, and increased nerve poisoning, and all the phenomena of an attack of cholera which causes this disease to run so rapidly to a fatal termination, similar to the manner in which over doses of croton oil or tartar emetic produce their poisonous effects. It generally requires some exciting cause to give rise to this train of morbid action, although the poison germ alone, by accumulating in the tissue, in many instances becomes the exciting cause.

It appears to me to be almost a demonstrated fact that there are persons on whom the poison produces no effect further than a local effect upon the nerves and mucous membrane of the alimentary canal, who reproduce the poison germ while only slightly unwell with a mild form of diarrhea, and communicate the disease to others more susceptible to its influence, which shows itself in the most malignant form. The moment cholera poison produces diarrhea,

Digitized by Google

that moment the disease commences; and certainly if it is contagious at one stage it must be so at another, and poison germs are thrown off at all stages as well as during the stage of collapse. We know that when cholera is prevailing there is always a much larger number of cases of diarrhea (cholerine) than cases which assume the form of collapse; and that cholera may be communicated by persons laboring under this mild form of the disease, I think now, from the abundance of evidence which may be adduced, can scarcely admit of a doubt. These views are similar to the theory presented to this Society in the spring of 1853, at which time the attempt was made to show how the disease might be spread by persons laboring under a choleraic diarrhea; how the infection might accumulate in certain localities emanating from the evacuations, and the danger of throwing the choleraic discharges upon the ground, a matter of vastly more importance than is generally admitted by the profession. During the prevalence of cholera in 1866 I saw, while attending a patient, the clear rice water discharges thrown into the yard as water, although I had given orders to throw all evacuations in the privy, that we might more thoroughly disinfect them. But the choleraic discharges being destitute of smell, and having but little color, are often, in the hurry and constant attendance required at the bed side, dashed down upon the ground like slops or water, and become sources of infection in the atmosphere. These views present a rational explanation how the disease is so rapidly spread over the country, and how the infection may accumulate in certain localities, sweeping off the inhabitants, as I have seen, in perfectly healthy situations, while those residing near the swamp and the marsh escaped the disease.

When cholera poison is introduced into a community susceptible to its influence, we have cholera, choleraic diarrhea, ("cholerine,") and occasionally at certain seasons of the year a form of dysentery. These three diseases I have seen intimately associated in our rural districts, apparently arising from one case that was introduced into the neighborhood. This leads us then to an inquiry into the relation between these different forms of the disease, a subject so extensive that we can but barely allude to it in this paper. In forming a theory of cholera, the fact must not be ignored that the disease is occasionally associated with a form of dysentery—a fact that must have been observed by every person who has seen much of cholera, and one that will have to be accounted for in the true theory of the disease; for if it required human agency to introduce upon our continent a poison which is the cause of cholera, the same poison must produce the disease under all its modifications, as diarrhea and dysentery.

To be able to make a proper diagnosis between sporadic diarrhea and choleraic diarrhea is sometimes extremely difficult, although these diseases must be widely different—the one depending upon a specific poison, and is a specific disease; the other a common inflammation or irritation of the mucous membrane of the alimentary canal. The same may be said also of choleraic dysentery and sparodic dysentery. In the choleraic diarrhea, however, there is generally a peculiar expression of the countenance, a *sunken appearance of the eye*, profuse watery discharges, tendency to profuse perspiration, often

Digitized by Google

accompanied with sudden prostration, etc., which may distinguish this form of the disease from the sporadic diarrhea, although it frequently occurs in so mild a form that it can not be told from our common diarrhea.

The dysenteric form of the disease is equally as difficult to distinguish from the sporadic dysentery as cholerine is from sporadic diarrhea. The inference that cholera may assume the form of dysentery arises from the intimate association which we frequently see between these diseases. When we see cholera introduced into a neighborhood which was previously free from bowel affections, and immediately afterward appears diarrhea and a form of dysentery in connection with cholera, it seems to me that these diseases must certainly have a common origin. This I have seen, and similar facts must have been witnessed by physicians who practice in the country, and who have by far a better opportunity for observing the manner in which cholera spreads than physicians residing in cities. It is not amongst the crowded population of a large city that we can study the progress of cholera to the best advantage, but in our rural districts, where the population is sparse and the inhabitants alarmed by the prevalence of the epidemic, live isolated from their neighbors, that we can trace the connecting links between the different cases that occur, and observe the different forms the disease assumes. When choleric poison is directed to the large intestines it seem to have a tendency to produce not only congestion of the mucous membrane, but *a low asthenic form of inflammation of this tissue.* In these cases there is generally sero-mucous discharges of a bloody or reddish brown color, severe tormina or tenesmus, the pulse small, countenance shrunken, skin frequently in forty-eight hours cold and clammy, restlessness and great prostration—but frequently some members of the same family will have the disease so mild as to resemble the mildest form of sporadic dysentery. These views are in harmony with the facts presented by cholera, and show how cholera, like other diseases, may assume different grades of violence, and may also prevail under different forms. I have endeavored to show that cholera poison is reproduced within the mucous membrane, and not within the blood, although the blood is the medium, the carrier by which it is conveyed to the mucous membrane. We see at once, then, how cholera may assume these different forms of disease, by a local action upon certain portions of this membrane. When the season of the year or any other predisposing or exciting cause directs the poison to the mucous membrane of the large intestines, then there may be cholera in the form of dysentery. When its specific effect is upon the small intestines alone we will have the disease in the form of diarrhea, and when the poison is directed to the upper portion of the small intestines and stomach then we have the gastro-enteric form, which may be mild cholera, and when the nervous system is fully susceptible to its influence then we have sudden collapse and cholera in its most malignant form—giving us diarrheal cholera, dysenteric cholera, mild cholera, and malignant cholera, and each form capable of changing into the other.

Another question of interest, and one which was suggested in the report to the Indiana State Medical Society in 1853, on page 170, in the following lan-

Digitized by Google

guage: "It has occurred to me, as a question worthy of consideration, whether the infection of cholera may not be slightly changed by the violence of the disease *being expended* upon certain parts of the system; for instance, *when the force of the malady is directed to the large intestines, producing dysenteric symptoms, whether the infection in this case would not be more likely to produce dysentery, and consequently spread a dysenteric form of the disease.*" The idea that we desire to suggest in the above quotation is, that as the mucous secretions and epithelial cells differ in different portions of the mucous membrane, as is well known, that it is probable the cholera germ may also be slightly modified by that part of the mucous membrane from which it emanates, and have a tendency to produce a modified form of the disease; and from the elective power which the different tissues have over poison germs, would be likely to spread in this modified form, but capable from circumstances of changing from one form to another. These views would account for cholera as an infectious disease, changing into and spreading under the form of dysentery. There are many arguments that sustain this theory, which, for their elaboration, would require entirely too much space to present in this paper.

Regarding cholera poison, then, as a nerve poison emanating from a mucous membrane, and the symptoms that follow an attack as depending upon nerve poisoning, we think that facts warrant the conclusion that the nervous system acquires the power of tolerating this poison, just as the nervous system acquires the power, as is well known, of tolerating the poison of tobacco, opium, etc. Not having acquired the habit of using tobacco, the chewing of a very small quantity produced on myself the most nauseating and distressing effects, while it scarcely can be doubted that a little practice would enable me to acquire the habit of chewing and smoking it to the same extent as others without, apparently, any inconvenience. It is a question worthy of investigation, how long this power of tolerating tobacco continues, when once acquired. From some inquiries which I have made I think it continues several years after the use of it has been discontinued. This power which the nervous system acquires of tolerating or resisting the influence of poisons, it appears to me, will explain many of the difficulties in accounting for the immunity which the system acquires to contagious diseases. The power to resist cholera poison varies greatly in different individuals, in different seasons, in different years, and in different localities. The last introduction of cholera into our country was during the general prevalence of unusual good health, which had a marked influence over the manner in which the disease spread, modifying its appearance in many respects. But as we have seen that it required human agency to introduce it upon our continent, consequently the same agency diffused it over the country, and it has manifested different grades of violence, generally of a mild form, but malignant where the poison could accumulate, as on board some of our steamboats or ships, or in some portions of our cities, and we have seen that it has disappeared from those cities in which the inhabitants were brought most fully under its influence. This I think may be regarded as a fact, that the more thoroughly a community

Digitized by Google

is brought under the influence of cholera the more perfectly is the susceptibility to this disease removed; a fact we attempt to explain by the power which the nervous system acquires of tolerating certain poisons.

To be clearly understood, then, I will repeat that from an abundance of evidence the cholera germ may be considered volatile, consequently the atmosphere is the medium that conveys it through the lungs to the blood. The blood then becomes the medium which conveys it to the tissue from which it is re-developed. In this tissue it becomes a nerve poison, and by its effect on the organic nervous system, this system is made instrumental in favoring its re-development, by determining the blood to the tissue in which it is formed. It follows, then, that by the poisoning of the nervous system an attack of cholera is produced, which agrees with the principal phenomena presented by this disease as shown by the suddenness of the attack, the rapid recovery, etc., which could not occur in a zymotic disease. I also regard the nervous system as capable, in time, of tolerating this poison, similar to the manner in which it acquires the power of tolerating the poison of tobacco and other poisons; that when this tolerance is acquired then cholera ceases to prevail except under very favorable circumstances, and from this cause, principally, the disease disappears from our country.

We will then, in conclusion, present in a few words a summary of the principal views advanced in this report:

That the cause of cholera is an organic poison, which is reproduced within the human system, and is diffused by human intercourse.

That cholera is not a zymotic or blood disease in which the infection is re-developed within the blood.

That the development of the infection is from the mucous membrane, particularly of the alimentary canal, at the time of an attack, varying in quantity in accordance with the space from which it is produced and the violence of the disease.

That the poison germ while being produced within the mucous membrane poisons the nervous system, which abnormal condition of certain nerves favors its re-development by producing a local hyperæmia of the part from which it is reproduced.

That the re-development of the poison germ is not only favored by the nerve poisoning, but by all the exciting causes which produce determination of blood to the gastro-intestinal mucous membrane, causing expansion of the vessels.

That the poison germ enters the circulation through the respiratory organs, and when within the blood has a tendency to act upon and be reproduced from the same tissue in which it was first developed, in accordance with a well known physiological law in which different secreting surfaces have an elective power over substances within the circulation, and different tissues produce different poison germs.

That cholera poison may emanate from certain portions, or the whole of the alimentary canal, giving rise to different symptoms as cholera, in the form of a dysentery, or a diarrhea, or malignant form of the disease.

Digitized by Google

That the poison germ, in emanating from different portions of the mucous membrane, it is highly probable, become slightly modified as the secretions and epithelial cells of different portions of the mucous membrane differ, but possess similar properties as productions of mucous membranes, and can be reproduced from any part of the mucous membrane which is in a favorable condition for their re-development.

That cholera poison emanating from a certain portion of the mucous membrane would be likely to be reproduced from the same portion of the mucous tissue when introduced into the system; as, for instance, those germs emanating from the colon and rectum would have a tendency to be reproduced from the colon and rectum, producing and spreading under a modified form of the disease.

That cholera is much more rapidly fatal when in a susceptible condition of the nervous system the poison germs are re-developed from the stomach and upper portion of the alimentary canal.

That the nervous system acquires a power of tolerating the poison from which cause the disease ceases to prevail in our country.

I believe that facts sustain these views, and these views harmonize with the facts presented by cholera.

Dr. R. E. Haughton:

I have no objection to make to the general statements conveyed in the paper. I should like, however, to ask a question. The gentleman stated that there is no blood poison; that the poison germs are redeveloped on the mucous membrane of the alimentary canal, thereby poisoning the nervous system. If there is no blood poison, how could there have been a poison developed on the mucous membrane of the alimentary canal? In other words, how could there have been poison in the blood, without it being a blood poison?

Dr. G. Sutton:

The blood may carry a poison without there being a blood disease. There are more evidences of nerve poison than of blood poison.

Dr. F. J. C. Rawlins:

What idea was intended to be conveyed by blood poison? then proceeded to give his experience in the Transylvania University of Medicine, during the prevalence of cholera. It was within his observation that in the section referred to, all persons who drank limestone water died of the disease, while almost all of those who drank cistern water recovered.

Dr. G. Sutton:

The poison cells float in the atmosphere; these are inhaled, pass through the lungs into the blood, circulate without development, and under favorable circumstances are developed in the mucous tissue of the alimentary canal.

As regards the effect of limestone water, it is difficult to say what it might be, when the poison germ is within the system. Anything, even lime-

Digitized by Google

stone water, that would tend to irritation of the mucous membrane might bring on cholera.

Dr. R. E. Haughton:

If the drinking of limestone water is calculated to bring on an attack of cholera, why do not limestone districts suffer every year?

Dr. F. J. C. Rawlins:

The state of the atmosphere may not be favorable to the development of the disease.

Dr. J. I. Rooker:

Why are people who live in cities, and drink what assimilates very closely to cistern water, the hydrant water, so scourged with cholera?

Dr. J. R. Weist:

Why is there so much cholera in the South, in districts entirely free from limestone?

Dr. V. Kersey:

This whole question of the lime water theory has been discussed at great length by men of the medical profession, possessed of great knowledge, but the fact that cholera invades districts entirely free from lime, has set aside the theory that limestone water, of itself, possessed in such cases any detrimental qualities.

Digitized by Google

REPORT ON SURGERY.

BY WM. LOMAX, M. D., MARION, IND.

In order to procure as full a report on the subject of Surgery as possible, circular letters were addressed to every living physician of the State, whose name appears on the Military Roll as having served in the Medical Department of the Army during the late war, and to all whose names appear on the records of the State and National Associations from our State, as well as all of my acquaintances in the profession, to the number of seven hundred and fifty, requesting them to furnish me a classified statistical report of all unpublished cases of surgery which had fallen under their observation. By this means I had hoped to be able to present a report, valuable in the ample and varied material it might contribute to our stores of observation, no less than the respectable science and skill of the profession of our State, which such a collection of statistics would justly vindicate. But in this I regret to say, the undertaking has proved a most signal failure; for, while a few responded in highly interesting and valuable papers, there was only about one in fifty of the entire number of physicians addressed from whom any responses whatever were received, and some of these only informed me that the writers had nothing out of the usual order of operations, such as amputations, removal of humors, operations for hernia, etc., to report. It is true, there was no particular form prescribed for the reports to observe, nor specialty to which investigation was directed. And while rare and remarkable cases were eagerly sought, it was not intended that the report should be confined to that class alone. It was my purpose to make a statistical report of every operation of any importance—such as giving the number and locality of the various amputations and other operations, the causes requiring them, with results, and any improvements which the observations of those having charge of them might suggest, and to report in detail cases of special interest. It was intended to classify and present them in a very summary and statistical form, but failing to obtain the material necessary for such a report, I shall only

Digitized by Google

present the papers which have been received, precisely as they came to hand, or where any have required partial revising, as nearly in the language of the reporter as the case would admit, all of which are herewith respectfully submitted. They are as follow:

Amputation at the Shoulder, in an old man in third stage of Consumption. By Jas. F. Hibberd, M. D., Richmond, Ind.

J. B. was a feeble old man, aged 63 years, wasted in flesh and strength by consumption, already progressed to the third stage. He had suffered for many weeks excrutiatingly with inflammation and abscess, involving the bone in the right arm. Finally the humerus ulcerated through and separated about the middle of the shaft, and the sharp, jagged points of the fragments piercing the surrounding inflamed tissues made life a torture. He reclined in bed, propped in a semi-recumbent position, the forearm and hand lying on a pillow, swollen to three times their normal bulk, the arm a mass of suppuration from the elbow to the shoulder, the pus streaming from various openings in almost incredible quantities, the pain so intense from motion that he would not allow the limb moved, nor involuntarily move his body, and when the calls of nature or the irrepressible cough compelled motion the suffering in the arm amounted to anguish.

I had seen Mr. B. several times in consultation, and had declined his solicitation to amputate the diseased member for obvious reasons, but now his situation was so pitiable that I felt bound to palliate his suffering by a removal of the limb, having already fully advertised him and his friends of the risk, which, after mature deliberation, they were not only willing but anxious to assume, deeming it better for the patient to die under the operation, than to live as he was for any length of time, long or short.

I amputated at the shoulder joint, March 30, 1863, cutting through suppurating and indurated tissue to find flaps. The patient bore the anesthetic and operation well, and rapidly recuperated afterward, visiting a neighbor within three weeks. The wound healed slowly, but eventually made a good stump, and the operation was a success for the purpose intended, relieving the old gentleman of his suffering, prolonging his life probably, and making it comparatively comfortable, until consumption accomplished its perfect work in death, about one year after the operation.

Amputation of the Thigh for Destructive Suppuration of the Knee Joint. By John Rea, M. D., Newcastle.

The subject of this operation was a male, aged 22 years. I saw him on the 29th of December, 1863. Found him with an enlargement on the front of the tibia of the left leg, occupying about the middle two-thirds of the leg, which fluctuated. I opened it, and two-thirds of a pint of bloody matter, or rather matter and blood mixed, was discharged. This had been developing

Digitized by Google

for about one year, but he had never consulted medical advice before. His health was not good, but he was not confined to his bed. For several months had abandoned his business. He was put on full doses of iodide potassium, a generous diet, and advised to take outdoor exercise. He improved for three or four months, but in the following July the disease assumed a more aggravated form, and still approaching the knee, in a short time formed sinuses under and around the joint, and discharged unhealthy pus for several months. I insisted on amputation as the only thing of any promise in his case. He persisted in not consenting to an operation until hectic fever had made its appearance, in the following February, 1864. I amputated the thigh at its upper third, which he bore well; had a slow convalescence, but ultimately got well and is still well. Dissection revealed the joint full of pus, and the articular cartilages abraded.

Amputation of the Leg for Incurable Ulcer. By the same.

On the 18th of January, 1867, I amputated the leg of a female, 44 years old, the mother of several children, on account of a burn of the lower part of the leg and foot, received fifteen years before from falling in the fire while in a convulsion, and which had never healed. She was of a consumptive family, and before the accident had a troublesome cough; but she has had neither convulsions nor cough since. I was fearful that the cough would return when the leg healed, but it has not yet. Her health is better than it has been for several years. The flap operation was the one selected in both of these cases.

Case of Lithotomy of the Gall-Bladder. By J. S. Bobbs, M. D., Indianapolis.

E. W., aged 30 years, requested my advice by request of Dr. Newcomer, for an enlargement in the right side. She is of spare habit, medium size, and nervous temperament. Has usually enjoyed pretty good, but never robust health. About four years ago she observed an enlargement in the right iliac region, about the size of a hickory nut. Its position she represented to have been low down in the iliac region. There was no tenderness of the part. Her health at the time was bad, and continued so for several months. She had neuralgia of the stomach, and food and drink created much distress. This was produced by much exercise also, and usually lasted three or four hours. The enlargement continued to increase in size, and become tender after exercise, and ultimately disabled her from walking, or, as she expressed it, "last winter (1867) she could not put her foot to the floor." Since January, 1867, the enlargement has grown faster and given more trouble.

Examination revealed a tumor just inside the right iliac bone, tender to pressure. Its outline could not be well made out, except on the right side, where its boundary was pretty distinctly defined. The most prominent part

Digitized by Google

could be traced on its lower border, while its inner margin, toward the spine, was less distinctly defined, and its upper limits still more obscurely marked. It admitted of a slight degree of motion from side to side and upward, but its movements left it uncertain whether the most prominent portion was the chief part of the enlargement, or only a projection from a deeper seated growth. The walls of the abdomen were tense, and slightly protuberant. The most careful examination per vaginum and otherwise disclosed no connections with the uterus or its appendages, although the limited motion in the parts did not demonstrate that no such connection existed. The uterus was tender, but did not seem to be enlarged, as it could not be felt above the pubis.

The patient was exceedingly anxious to have something done for her relief, as she could not take any exercise, or follow her occupation of running a sewing machine, without its being followed with pain and tenderness of the parts, and which extended down the right limb.

So much obscurity surrounded the case that I requested further examination and consideration at some subsequent period, before attempting to diagnose the character of the tumor. This examination was made, but revealed nothing new, and tended to confirm the opinion partially arrived at on the previous occasion, that the enlargement had no connection with the uterine organs; but beyond this, nothing definite as to its character or connections could be made out. It had the position and appearance of ovarian tumor, and the patient so regarded it, from the opinion of other physicians whom she had consulted. She was informed that its ovarian character was very doubtful, and its true nature very uncertain, and that if it were the former I could give no assurance that it could be successfully removed. She, however, so persisted in the request that I should undertake its removal, that I finally consented to make the attempt, and on the 15th of June, 1867, assisted by Drs. Newcomer, Todd, Comingore, Mears, Moore, Avery, and a medical student, proceeded to do so.

An exploratory incision was made between the umbilicus and pubis, the patient being under the influence of chloroform. The omentum was found to be thickened and adherent to the walls of the abdomen. It was separated by a finger, as far as this could reach, toward the right side, along the whole extent of the section—about four inches in length—in hopes of reaching some part where no adhesion existed. Failing in this, with two fingers of either hand the omentum was torn through over the tumor, so as to admit the finger which came upon the protuberant portion of it. Passing the finger around this, some adhesions were broken up, and the tumor traced upward. Other adhesions which it had formed with the parts around it were also discovered, and what seemed to be a smaller lobe in its upper part, but no pedical or attachment could be felt. Enlarging the opening through the omentum, the tumor was plainly visible, but the orifice would not admit of its exit. The wound through the abdominal walls was carried an inch above the umbilicus on the right side, over the prominent part of the enlargement, which was made to pass through it. This was found to be oval in form, about five

Digitized by Google

inches in length, and two inches in diameter at its widest part, tense, and evidently contained a pelucid fluid. No pedicle could be made out, and the sack showing its contents to be transparent, its lower margin was cut through, when a perfectly limpid fluid escaped, propelling, with considerable force, several solid bodies about the size of ordinary rifle bullets. Introducing the finger other solid bodies were felt, but not in the main sack. A number were hooked out with the finger, and varied in size from that of a mustard seed to that of a bullet. One of the latter size could be distinctly felt, but no communication between the space containing this and the main sack could be found, and it was not removed, being situated at the extreme end of the finger. The sack had the appearance externally of an hydatid, its walls were of the thickness of ordinary cuticle, smooth in its inner aspect, and were whitish and semi-pellucid. Pulling it downward, after being evacuated, brought into plain view the right lobe of the liver, to the lower surface of which it was attached by a broad linear base like the gall bladder. The finger introduced into the sack detected what seemed to be smaller sacculi, opening into the main one.

It had the appearance of an enlarged gall bladder, or an appendage to this, although its size, the clear serous character of its contents, and the thickness and semi-transparency of its walls, might justify some degree of doubt upon this subject. From its form, attachments, and solid accretions, one of which could be so distinctly felt in a diverticulum, but which I did not succeed in removing, seemed to mark its identity with the gall bladder, and deterred me from the excission of the sack, as I should otherwise have done. I therefore put a stitch in the cut lips of its walls and cut the ends closely. This step was suggested by the apprehension that if any portion of its solid contents should have been overlooked, their escape into the cavity of the abdomen would be prevented, and the belief that the sack, in the event of its refilling with fluid, would become adherent to the walls of the abdomen, and be within the reach of a trochar, and make it practicable to obliterate it by injection, if it became necessary.

It would have been gratifying to have determined the condition and relation of the parts more satisfactorily, but the adhesions existing, as the result of past peritoneal inflammation, rendered this impracticable, without increased hazard to the patient.

The wound was closed by sutures and adhesive plaster, no vessel requiring to be ligated, and thirty drops of laudanum given after the patient was placed in bed.

16th, 8 o'clock, A. M. The patient was slightly feverish; had slept half the night; complained of some soreness on both sides under the ribs. The abdomen very slightly swollen on the right side, which was tender to pressure. Urine was removed by the catheter, as it had been the previous evening. Ordered all company to be excluded, great quietude, and no more movement in bed to be allowed than became necessary to relieve her posture when it became irksome. As she complained of her bed, another was placed along side of it, upon which she was removed

Digitized by Google

17th. Somewhat feverish; pulse 100. Slept some last night; drank some lemonade. Complains that the laudanum made her sick. Taste bad. Lies on either side or back. No increased fullness of the abdomen. Wound uniting.

Evening. No fever; skin moist. Is very cheerful. Urine drawn off, although she desires to rise and pass it.

18th. Complains of some general soreness and chilliness. Lay at an open window after a rain storm, and thinks she took cold; the weather having become suddenly cool after being very warm. Ate an egg for breakfast and some rice for dinner, which tasted better than anything taken since the operation. Pulse 95, and full. Can lie on either side or back. Thinks she is not quite so well. Abdomen less full and tender to pressure.

19th,—morning. Is comfortable, except the dysurea. Have not permitted her to rise as she requested, the catheter having been used twice a day since the operation. Is subject to trouble about the bladder, and was much anoyed with it before the operation, being compelled to pass urine at short intervals. Did not think this of sufficient importance to make it known before the operation. Pulse quiet. No fever. Took some breakfast, which relished better than usual.

Evening. Began to complain of the bladder soon after morning visit, when I drew off half a pint of urine. This continued all day, and at 5 o'clock she got partly out of bed and passed some urine. Can never pass urine unless in an upright position. Pulse some disturbed, being 110. Skin warm, but not hot. No fullness of the abdomen. Complains of pain in the left side under the short ribs. No increased tenderness of the abdomen. Passed but little urine when up. Constitutional disturbance more marked than at any time since the day after the operation, but not very marked. Ordered: Bi-carbonate soda, gr. v. Bi-meconate of morph. gr. 1-10, to be repeated every two hours until relieved. Also, 25 drops of laudanum to be added if necessary after the first portion. Fomentations to the abdomen.

20th—morning. Removed half a pint of urine, which gave much relief. She slept part of the night. Pulse 110. Some fever. Tongue sticky, which she charges to the laudanum taken. No fullness of abdomen or increased tenderness. Complains of pain on the left side, under the ribs. Thinks she can not move herself so easily. Can lie on either side, but best on the right, but lies mostly on her back, with the knees drawn up. Took a cup of tea.

Evening. Is a little feverish; pulse 110. Drew off half a pint of moderately high colored urine. She ate a few strawberries, a slice of bread, and drank a cup of tea at noon. The wound looks closed, the ligatures and plasters not having been disturbed. During the previous night had taken three portions of soda and morphia, and once 30 drops of laudanum, which have been obvious in their quieting influence during the day. One portion of the former was given at noon, and another ordered to be given at night, with the laudanum in addition, if necessary to secure quietude. The bowels having been well evacuated before the operation have not acted since. Fomentations to the abdomen to be continued.

Digitized by Google

21st—morning. Removed half a pint of high colored urine with much relief. Took one portion of sodæ and morphia during the night. Slept some; pulse 110. Skin warm, but perspirable. No tumidity of the abdomen, and less tenderness. Mouth sticky from effects of laudanum. Drank a cup of tea.

Evening. Complained from 12 o'clock, M., of disposition to urinate, which gives her much distress. Removed half a pint of high colored urine. Has taken three portions of the solution of sodæ and morphia during the day. The pulse is some excited, and skin warm. No tumidity of the abdomen. A healthy discharge is issuing from one point in the wound. No increased tenderness of the abdomen. Ordered the sodæ and morphia to be continued when required.

22d—morning. Rested last night after taking two portions of solution and 25 drops of laudanum. Removed half a pint of high colored urine, with alkaline smell and some turbidness. Pulse 100. Skin warm and moist. Tongue slightly coated, and mouth pasty. Removed the dressings and stitches from the wound, and replaced adhesive straps. The wound was adherent in most of its extent. Some thick pus issued from one point, at the junction of the lower with the middle third of the wound. Abdomen less full and much less tender. Feels much better, and complains of nothing but urinary trouble. Allowed her clothing to be changed, which she has begged permission to do for several days. Direction: Ext. hyosiami ʒij, bal. capaib. ℥ij, spirt. nit. ℥ij. M. One teaspoonful to be taken three times a day, with fomentation to the abdomen.

From this period her recovery was progressive, and requires no special remark. In about two weeks she was permitted to sit up, and in three weeks to move about her room, and in four to ride out.

Careful examination of the solid concretions removed leaves no doubt of their being biliary calculi. They are irregularly spherical in shape, smooth on the surface, which is of a mahogany color, and polished. The interior is of a whitish yellow, stiriated and porous. They are of light specific gravity, and numbered some forty or fifty, the majority being of the size of small shot. When access to the enlargement was reached, the surrounding parts were so agglutenated by old adhesions as to prevent a satisfactory inspection of its deeper portion. After the sack was opened more space was obtained, and its attachment to the under surface of the liver could be both seen and felt, and had the appearance of an hypertrophied gall bladder. Its lower extremity projected about five inches from the free margin of the liver. The cystic duct was probably obliterated from irritation produced by these concretions, and the one felt at the extremity of the finger was probably lodged in one of the biliary ducts.

Various authors have reported cases of hypertrophy of the gall bladder, but I believe they have usually found traces of healthy or vitiated biliary matter in the fluids contained in the cysts. In this instance the fluid was perfectly pellucid and watery, the solid and coloring matters having either been appropriated by the concretions, or had become absorbed or diffused

Digitized by Google

The patient's complexion was somewhat sallow, but no more so than is frequently observable in those suffering from organic disease. She was rather anemic.

Since the operation she has had intermittent fever at intervals, and impaired digestion, and at such invasions complains of pain in the region of the enlargement. At other times she suffers no inconvenience, and is able to pursue her calling of working a sewing machine. No appearance of the enlargement recurring is observable, up to the present, ten months since the operation.

A case of Wound of Labium Pudendum, extending into the cavity of the Abdomen. By John W. Pugh, New Cumberland.

On the 23d day of March I was called to see Mrs. W. G., aged 42, and mother of eleven children. In attempting to rescue a child from the cruel correction of an angry and impetuous husband, she had drawn upon herself a violent blow from a kick with a heavy boot, taking effect upon the right labium pudendum. Severe pain was produced, followed by nausea and faintness. It was soon observed that there was also hemorrhage. Not knowing but that she might be in a state of pregnancy, it was feared an abortion might take place. A vaginal examination was made, without discovering anything to account for the hemorrhage, more than the wound inflicted by the blow. In a few days I was again called on account of the labia, mons veneris, lower part of the abdomen, upper part of the thigh, and natis being perfectly ecchymosed from extravasated blood. Upon examining the parts the labium was found greatly swollen and everted, with a small wound in the integument, large enough to admit the point of the little finger. This was about the middle of that body, and near an inch to the right of the union of the integument and mucous membrane. A clot of blood protruding from the vulva was found, upon further everting the swollen labium, to come from a large, irregularly shaped lacerated wound in the side of the vagina, and was removed, when the finger could be readily passed downward and backward through an opening in the soft tissues nearly to the tuberosity of the ischium. When the clots were removed from the upper parts of the wound the finger was passed along a large free opening, in the direction of the inguinal canal, until it came in contact with a loop of the bowel. Pressure made externally with the hand caused it to slip again into the cavity of the abdomen. A large slippery-elm poultice was applied over the wound, and secured with as much pressure as the state of the parts would tolerate, and perfect quietude enjoined. Opiates were given, to insure as great freedom from suffering as possible. The tenderness of the abdomen, which was never great except at the lower part, passed away, and she steadily and rapidly improved; the wound healed kindly, and in a few weeks she recovered perfect health. During the progress of the case a small abscess syringe was occasionally used to wash out the wound along the ramus of the pubis and

Digitized by Google

ischium, while a large enema syringe was employed to move the bowels. When it was thought safe, directions were given the family to follow up the treatment. On the next day the mother of the patient, an ignorant old lady, undertook to wash the wound, and not understanding the directions very well, took the large syringe and injected twenty-four ounces of warm water through the wound into the cavity of the abdomen. Soon as the mistake was discovered I was called in great haste, and found the woman alarmed, and, apparently, almost smothered. A male catheter was passed through the wound, and turning the patient into the most favorable position, a few ounces of water were drawn off, which seemed to give relief, at least to her fears, upon which I thought much of the dyspnœa depended. A full anodyne was given, and for a few days the case was pretty closely watched. The improvement, however, was interfered with but for a very short time, and soon progressed without further interruption to a perfect cure.

Dislocated Testis—Operation for Hernia. By THOMAS S. BAYSIE, M. D., Spiceland.

Dr. Baysie reports a case of a plump little Irish lad, four years of age, who some two years ago, in a violent paroxysm of whooping cough, got inguinal hernia of the right side. "An inveterate mayapple Æsculapius, who was treating the case, returned the bowel, and sent the testicle in with it. A truss was applied, and the opening readily closed. Lately there is much pain in the locality, which, in fits of coughing, is almost intolerable." The doctor asks if an attempt to correct the displacement by the use of the knife, would, under any circumstances, be justifiable!

Cæsarean Section. By H. CASE, M. D., Metamoras.

Dr. C. S. Arthur writes: "In 1862 or 1863, Dr. H. Case, of Matamoras, performed Cæsarean section on Mrs. K—, of this (Jay) coun'y, which resulted in her recovery. I think the case has never been published."

Compound Fracture of the Leg. By G. W. BURKE, M. D., Sulphur Springs, Ind.

I was called six miles, August 23, 1867, to see Robert Star, age 15. While riding a horse and leading one from the field in which he was plowing, with a bucket on his arm, the horse that he was riding became frightened at the bucket, and threw him, tramping on his right leg, and fracturing the tibia obliquely for about two and a half inches, commencing at the junction of the middle and lower third, causing it to protrude from a wound three inches long, the projecting portion being denuded of periosteum, also transverse fracture of the fibula at the same place, and rupture of the interosseous artery, from which he lost considerable blood before I arrived. I made

Digitized by Google

an effort to replace the protruding bone, but could not. I tried every way, but failed in all. I enlarged the wound, and replaced it, at the same time bringing the broken fibula (the ends) in apposition. I held the parts in that condition for about five minutes, in order to rest the muscles and the patient from pain, and then placed the leg in the hands of a strong man until I made suitable splints to hold the parts together, so as to bear transportation to town the next day, when I dressed it in the following manner: I laid him on his back, flexed the thigh on the body and the leg on the thigh. I made a splint for the outside of the leg, properly padded, and laid the leg on it, and applied a bandage, commencing at the toes, up to the knee, not covering the wound; cold water dressing to the wound. The wound healed, and the bones united without an unfavorable symptom, any more than you could expect from the denuded portion of the bone, since the bone has been removed. Wound healed, and no shortening of the leg, except about one-tenth or one-eighth of an inch. The boy was not very stout but healthy. My object in leaving the denuded bone was to have the parts remain quiet when I had them *in situ*, and allow nature to dispose of the denuded bone if possible; if not, I could remove it when it was causing mischief.

~~Case of~~ *Compound Comminuted Fracture of the Inferior Maxilla.*

By J. N. Parr, M. D., Joliet, Ind.

On June 25, 1866, I was called in haste to see a young man on whom an old log church had falled, while he and others were trying to remove it. He was taken out of the rubbish almost dead, but had revived by the time I got there. I found, upon examination, that the submaxillary bone was fractured in three places, viz.: on the left side, the neck, on the right, the body, about half an inch from the symphysis; and the third, about midway between this and the angle. The soft parts embracing the integument and buccinator muscle were torn in two for most of the way from the commissure of the lips to the ear. Finding it impossible to adjust the parts, hold them, and bandage them alone, I called medical assistance. There was nothing new in the treatment. The only or chief trouble was to get the loose fragment between the second and third fracture to stay in its place. For this purpose we adjusted it, and then tied the teeth nearest the points of fracture together with a silk thread. The soft parts were stitched, and all the fragments of the lower jaw brought in proper coaptation with the upper. Then a single broad bandage, so tight that it was impossible for the teeth to slip upon each other, was passed under the jaw and over the top of the head. The patient lived on fluids about one month, and made an excellent recovery, leaving no deformity whatever. The point of interest is, the simple means by which the parts were held together; no clumsy apparatus.

Digitized by Google

Cases—Necrosis, Dislocation, Amputation. By H. V. PASSAGE, M. D., Peru, Ind.

About four years since I was called to see a boy about 16 years of age, who had a row of small openings on the posterior part of the thigh from the knee to the hip. The openings were of the pouting kind, which denote necrosis of the bone. On probing, I could find the *cloacæ*, with a small hole communicating with the necrosed bone. I gave the patient chloroform by inhalation, and made an incision along the posterior part of the thigh, extending from the knee to near the trochanter major. The incision being made down to the *cloacæ*, I then cut through that substance with a cartilage knife, and extracted the necrosed bone with forceps, and the patient recovered perfectly within one year.

About two years ago I was called to see a very large, stout, muscular man, who had a dislocation of the shoulder joint, of forty days standing. It was a forward dislocation, and the contraction of the sternal portion of the pectoralis major had drawn the head of the humerus to a point, about half way between its normal position and the sternum, and just beneath the clavicle. The pectoralis was powerfully contracted, and had been pulled at with various machinery until the case had been abandoned. I gave the man chloroform by inhalation, and kept him under its influence four hours, before the muscles were sufficiently relaxed to allow of the reduction of the dislocation. I report this case to you to show the power of chloroform to control muscular contraction, when it is administered sufficiently to produce profound anesthesia, and the patient kept in that condition a sufficient length of time.

Last February I was called to see an Irishman, who had been intoxicated, had layed out, and had frozen his toes and a small portion of the anterior part of the foot. The line of demarcation had formed just behind the articulation of the metatarsal bones with the toes. It was desirable to save as much of the foot as possible, and consequently I made my incision in the line of demarcation, and cut the metatarsal bones with bone forceps, and made an amputation without a flap. To have dissected back far enough to make a flap and cut the bones in the middle would have materially injured the use of the foot. I trusted to granulations to cover the ends of the bones and form a flap, which was done. The feet are now well, and the stump is as nice as anything ever made by covering with a flap. I will say that the amputation of both feet were alike. The granulations, when properly treated, will do much toward making good stumps.

Amputation of a Scirrhous Breast without Recurrence of the Disorder for Seven Years. By JAMES F. HIBBERD, M. D., Richmond, Ind.

On the fourth day of December, 1861, I amputated the right mammary gland of Mrs. P., aged about fifty-four years. She had borne children, and her general health was fair, until an indolent tumor in her breast began to in-

Digitized by Google

crease in size, and be the seat of severe lancinating pains. The tumor was not large, when, after a few months, the skin became involved, corrugated and fissured; creating so much suffering as to destroy both rest and appetite.

The tumor was unquestionably malignant, but the axillary glands were not perceptibly diseased. After the ablation of the gland, the wound healed soundly, and the patient has continued in excellent health ever since—a period of over seven years—without (and this is the only point of interest in the case) any further manifestation whatever of malignant disease.

Amputation of Mammary Gland. Nine Cases. By Wm. Lomax, M. D., Marion, Indiana.

Case 1.—R. W., farmer, aet. 72, July 17, 1862. Two years ago observed an induration of the left nipple, with some enlargement of the gland, with neither pain nor tenderness. It very slowly increased in size, until within a few months the growth has been rapid, and accompanied by lancinating pains darting through the humor and into the surrounding parts, with a shallow ulcer upon the most prominent point. It was lobulated with enlarged, tortuous veins coursing through it, distinctly circumscribed, excepting at the inner and lower border where it faded into the engorged tissues without any definite boundary—freely moveable upon the ribs—and a small cluster of enlarged lymphatic glands occupied the axilla. There was a trifling cough, to which he said he had been subject for the last forty years. Nothing specially abnormal noticeable in respiratory sounds. The heart's action was regular and healthy—the health and strength failing under constant and intense suffering. Having made up his mind to have the diseased part removed by a surgical operation, chloroform was cautiously administered, and he was very quietly passing into a state of insensibility, when the breathing suddenly became interrupted by the drawing in of the lips and cheeks, and closing of the nostrils at each respiration, when the chloroform was immediately suspended, and the mouth held open. The pulse, which, for a short time, was scarcely affected, suddenly sunk and became almost extinct. Efforts to arouse him not being readily responded to, an incision was made at the base of the tumor, which, causing a struggling, partially restored the breathing. The operation was proceeded with hastily, and the patient being in a state of unconscious sensibility, quivering and writhing under the dissection, while the mind was not cognizant of what was going on, had to be held by the assistants until it was completed. The hemorrhage from the dilated bloodvessels was rather profuse, but as promptly controlled by the assistants as possible. Two arteries only required to be ligated. Soon as the hemorrhage was sufficiently suppressed, the wound was closed and secured by stitches and straps, and the usual water-dressing employed. Brandy, paregoric, and external warmth, were diligently used; but he revived slowly, remaining pale and faint, with a feeble pulse, profuse perspiration, and a cold skin, for an unusual length of time. The prostration was so great it was

Digitized by Google

thought not advisable to disturb the axillary glands, which we contemplated removing in the commencement of the operation. At the end of three hours reaction had returned, and he was comfortable. The wound healed readily, but, after a brief respite from the disease, it returned and proved fatal, as I learned, in about two years from the date of the operation.

Case 2.—G. S., mechanic, aet. 56, June 10, 1856. Carcinomatous enlargement of mammary gland; size of a man's fist; very hard and painful; removed in ordinary way; wound readily healed; no appearance of return for six years; received a bruise in the cicatrix, which was followed by soreness, swelling, and glandular induration in the soft parts in and around the location of the original disease. These increased until, coalescing, the entire soft parts became one common, rough, irregular, indurated mass of morbid tissues. The cartilages of the ribs were bent in, thickened, nodulated with carcinomatous growths; breathing hurried, imperfect and short, distressing dry coughs; intense pain of chest; hectic fever; emaciation, and death without open ulcerations.

Case 3.—E. I., widow, aet. 46, September 24, 1866. About two years ago she noticed a small lump in the upper part of the left mammary gland, which was free from pain and tenderness, and quite as moveable as the gland itself. For a while its growth was slow, and at times appeared stationary. But for the last year, and especially the last few months, it has been increasing in size, and had become a large tumor. It was lobulated, with soft points here and there, feeling as if there might be circumscribed collections of fluid contained in them, one of which was punctured with an exploring needle to the depth of an inch and a quarter, and nothing escaped but a thin, florid blood. With the exception of greatly enlarged superficial veins, there was no discoloration of the skin. The pain and suffering had increased with the growth of the tumor, until there was scarcely any rest at all. It was not adherent, either to the integument or deep structures, tender to pressure, and the axillary glands were not affected, which, with the vigor of health remaining, led to a hope for a favorable result from an operation. Chloroform was given, and the tumor enucleated in the usual manner. The hemorrhage was not great, only two arteries requiring to be ligated. The wound was closed and secured with sutures and straps, and, under a simple treatment, a speedy and favorable result was obtained. There has been no symptom of a return of the disease since. The tumor weighed three pounds and three quarters. Small collections of a ley-colored fluid of a treacly consistence, were found in some of the lobuli. Others were composed of a soft, encephaloid substance, and some of scirrhous indurations.

Case 4.—Mrs. P., aet. 48, married and mother of several children. July 3, 1862.—The entire mammary gland had the appearance of being composed of a nodulated mass, presenting a dark, livid color, painful and tender to pressure, of recent growth, and increasing rapidly, the skin adherent upon some of the prominent points, but the tumor was easily moveable upon the tissues beneath; the lymphatic glands of the neighboring parts not perceivably implicated. The general health had been failing for some time. A

Digitized by Google

judicious course of therapeutic treatment, thoroughly tested by Dr. Palmer, a scientific and reputable physician of Warren, had set aside all hope from that quarter. An operation was advised and consented to. The affected part was thoroughly removed. The wound speedily healed, and she has enjoyed perfect immunity from the disease ever since.

Case 5.—Mrs. E. B., aet. 72, married, and mother of four or five children. August 22, 1851. Two years ago got a slight bruise upon one of the mammary glands, followed by a small hard lump, giving no pain for some months, and increasing but little in size. It finally took on a decidedly rapid growth, and becoming quite painful, medical aid was sought, and the tumor treated with a view to its discussion. The treatment was persevered in until all hopes of obtaining a cure by that means abandoned, and a cancer doctor looked for. One was soon found, who agreed to insure a cure by the use of something that would "eat it out by the roots." He was regularly installed, and went to work with his destructive pastes. A frightful ulcer was soon obtained, with a large addition of tortures, and an alarming exuberance in the growth of the disease. The tumor was now about the size of her head, presenting a horid front of everted fungous granulations, from which a profuse discharge of a fœtid puro-sanious matter was constantly dribbling. There was a cluster of enlarged lymphatic glands between the tumor and axilla, but none in the latter. The tumor was moveable upon the ribs. The patient, having fully made up her mind to have the thing extirpated, and retaining a considerable amount of constitutional vigor, the operation was performed in the usual manner, under the influence of chloroform. There was not a great loss of blood, and she came from under the chloroform very nicely, and was left comfortable two hours after the operation. The wound healed readily under simple dressings. The woman died five years after, of dysentery, without return of disease.

Case 6.—Mrs. W. J., aet. 44, married, mother of eight children. October 13, 1865. Some twelve months ago, a small tumor was discovered in the upper and outer aspect of the right mammary gland. At this this time she was *enciente* some four or five months. As pregnancy advanced it increased in size, and became somewhat tender and sore to pressure, and at her accouchment was quite large and protuberant. An eclectic doctor was consulted, who treated the case with cataplasms of "Carpenter's Square." The treatment was persevered in six months without retarding in the least the progress of the disease, and it was laid aside. The entire gland was now involved in the disease, presenting a large, uneven, nodulated surface, with a number of prominent points which were soft and fluctuating, and of deep purple color. A lymphatic gland on the axillary margin of the pectoralis major had become inflamed, and attained half the size of the fist, with the margin firmly attached to that of the mammary tumor. Above this, in the lower part of the axilla, was a cluster of enlarged lymphatic glands. The whole of the diseased parts was freely moveable, not being attached to the ribs below. The patient was a spare, but vigorous subject. The general health was failing, which, she said, was more from anxiety of mind than suffering caused by

Digitized by Google

the disease. An operation was proposed, as the only, and very uncertain, hope in the case, which was readily consented to, and the entire gland, with every vestige of disease that could be seen, was removed. The tumor on the margin of the pectoralis major was adherent to that muscle, and the fibres involved were dissected away. With some difficulty the edges of the wound were approximated without dissecting from the parts beneath, and secured by sutures and straps. A full anodyne was given, and simple dressings applied. The loss of blood was not great, only one artery requiring to be ligated. The case progressed favorably, and the wound soon healed. The general health improved, and, to all appearance, the cure was perfect. But this proved only temporary; for, after some four or five months' respite, a small tumor made its appearance near the cicatrix, which grew rapidly, and was soon surrounded by a spreading crop of indurated lymphatic glands. Disappointed and discouraged at the return of the disease, the patient was an easy prey to any form of imposture that might have the unscrupulousness to make large promises in the case. Soon a cancer curer made his appearance, professing to have a medicine of such remarkable power of discrimination as to ferret out and remove all diseased parts, without the least injury to the sound flesh. A very reasonable business contract of "no cure no pay," only for the medicine, was obtained. It took twenty-five dollars to procure and put the medicine in motion, to commence with, and a few additional ten dollar bills for changes and recruit of supplies, and the unfortunate patient went the way of most of the dupes of this most execrable species of knavery.

Case 7.—M. A. B., aet. 36, a maiden lady. July 21, 1859. Eighteen months ago she noticed a tumor about the size of a hen's egg in the upper part of the breast, just below the margin of the pectoralis major. It was hard, insensible, and loosely imbedded in the tissues. An itinerant doctor was consulted, and proposed an operation for its removal. Before the wound healed, a fungous growth sprouted up and grew rapidly, and active ulceration set up in the upper part of the mammary gland. An ulcer also formed in the anterior margin of the axilla, under the border of the pectoralis. These were treated for some months by the same traveling doctor, with escharotics, their ravages steadily spreading, until they coalesced and formed one common ulcer, presenting a large open cancer, with purple indurated margin, a profuse, offensive serous discharge, and recently it had broken out and bled freely a few times, adding to the increasing debility, which, under the constant, wearing suffering, was uninterruptedly going on. The lymphatic glands were remarkably free from morbid changes. A few only in the axilla were affected. The diseased mass was sufficiently moveable to show that no firm adhesion to the bones had formed. A conference of physicians agreed in the opinion that the only treatment holding out the least promise would be the entire extirpation of the diseased tissues with the knife; that the operation was not free from the hazzard of immediate death, and should it be survived, it was uncertain whether the wound could be healed. That the probabilities, however, were that she could bear the operation, and that it would not shorten her life, but possibly might prolong it. These opinions were

Digitized by Google

plainly stated, with as few emotional terms as possible, and the decision as to what should be done left with the patient. After consultation with friends, and due deliberation, she decided to venture an operation, which was at once performed. An irregular elliptical incision was made to embrace the whole area of the disease, one extremity below and internal to the gland, and the other including the insertion of the pectoralis major, which was detached from the humerus, and the whole of the muscle, excepting a small portion of the upper part covered by the deltoid, dissected from its origin, with the mammary gland and all the affected tissues. The wound was so large the integument could not be made to yield a covering without extensive dissections, which were made upon one side; but the powers of life were so depressed and rapidly failing, it was thought best to recusitate the patient at once. The wound was closed as far as could be, and secured by sutures and straps. A sharp ellipse, of an inch at its greatest width, remained open. A folded cloth, dipped in cold water, was applied to the wound. The loss of blood was not great, considering the extent of the dissection. Reaction came up slowly, but, under the free employment of stimulants, the circulation was tolerably well restored in the course of two hours. The patient was left in care of a physician living close by. Some four months after I was called to see the case again, and learned that healing had progressed kindly, and cicatrization was almost perfect, when she had an attack of ague, which, relapsing two or three times, finally resulted in remitting fever, by which the vital powers were much reduced. In this feeble state of health ulceration set up in the cicatrix, and had been slowly but steadily progressing ever since. The cold water dressing had been kept up over three months, which was probably not the treatment most favorable to prompt healing. The cancerous ulcer was an inch wide, and two inches in its greatest extent, shallow, and beset with a number of indurated lymphatic glands. The healing of the wound had bound the arm firmly against the side of the chest, which was a source of great inconvenience, from the sanious matter dribbling between the arm and body, and excoriating the parts, which took on the character of the prevailing malady. She was put upon the use of bromide of potassium, given three times daily, and an ointment of iodide of mercury and extract of belladonna, applied over the enlarged lymphatic glands and proximal sound surface; and the ulcer was touched lightly two or three times daily with a saturated solution of prechloride of iron after being gently sponged as dry as could be done. She was directed to live on milk and a farinaceous diet, with strict observance of cleanliness of the parts about the disease. I saw her no more, but learned that the disease terminated fatally, about one year after the operation.

Case 9.—M. B., aet. 40, married, and mother of five children. February 11, 1852. Had scirrhous indurations, involving three-fourths of the mammary gland, not greatly enlarged, but exceedingly painful, integument firmly adherent, tucked, rough, and discolored upon the upper and outer part of the disease. The discolored portion was small, and might have been covered with a copper cent. At this point the skin was a dark brown, drawn

Digitized by Google

in as if adherent to unyielding parts beneath, while the tumor around had enlarged above it, the epidermis thick as that of the heel, dry and rough like the bark of a tree. The patient being *enciente* (five months at this time) had been put on a palliative treatment, and advised to defer an operation until after accouchment. But the disease was increasing, and the pain had become so constant and excruciating, she thought she could not live until that period without its removal. The countenance had become cadaverous, with progressive emaciation and debility, which, with the failure of anodynes to relieve the pain, led us to yield to her request to extirpate it. This was done in the usual manner, the patient being under the influence of chloroform. She rallied well from the chloroform and shock of the operation. In three weeks, with mild dressings, the wound was perfectly healed. About this time she began to feel some pains of loins, hips, and the inferior extremities, which she supposed to be rheumatism. These growing more severe, fever was excited, and the pain, which at first was wandering, finally became located, and settled in the knee joint, which became swollen and most intensely painful. On the 24th of March labor came on, from which she was much exhausted. She continued in a low, feeble condition, without notable change, until May 3d, when she was seized with violent pleuralgia, great dyspnœa, feeble pulse, running to 130, cold, clammy sweats, and on the 4th she died. There was no evidence of any tendency to return of the disease about the breast.

Case 9.—Mrs. M. M., aet. 46, married, and mother of seven children. August 30, 1850. Had a large, nodulated, scirrhous mammary gland; integument adherent over considerable portion; purple, with softened points, very painful; general health failing; has been perseveringly treated for months, with a view to its removal by discussion, without apparent benefit. Tumor was removed and wound healed readily—health restored. Six months after the operation, a tumor the size of a hen's egg, and another half as large, had formed near the cicatrix, both of which were extirpated. Two months after, there were a great many lymphatic glands indurated, in and around the parts, from the size of a pea down to that of a hemp seed, which disappeared under the application of an ointment of iodide of mercury and extract of belladonna. Not long after this she had an attack of periodical hemicrania, coming on in the morning and passing away in the evening, leaving her comfortable until the hour of return the following day. For a while these were controlled by quinine and morphine; but, becoming more intense, nothing short of stupefying doses of the anodyne would secure the least rest. During one of these paroxysms she suddenly became perfectly quiet. It was soon after found that there was paralysis of one side of the body. In a few days she died, without return of consciousness. No post mortem examination was made.

Digitized by Google

A Case of Amputation of Mammary Gland—death nine years after from Disease of the Brain. By Dr. S. S. Horne, Jonesboro.

Mrs. D., aet. 50, married, and mother of fourteen children. June, 1857. With the exception of an occasional attack of sick headache, had enjoyed good health all her life. Observed, when nursing one of her children in 1840, that the nipple of the right breast had become somewhat shrunken, and before the child was weaned was in a manner obliterated. Not far from this time she noticed a small tumor, about the size of a garden pea, immediately below the nipple. No pain or uneasiness whatever was produced by the tumor until the year 1856, when sharp lancinating pains were felt, radiating from the tumor through the gland. The tumor was now about the size of a hickory nut. Dr. Meek and the reporter were consulted, and gave it as their opinion that the tumor was scirrous. The pain and size of the tumor rapidly increased, and Mrs. D., in the following year, consulted Dr. Wm. Lomax, who concurred in the opinion previously given as to the character of the tumor, and advised extirpation. Accordingly, in June, 1857, Dr. Lomax amputated the gland. The wound healed rapidly and almost throughout, by the first intention. All the painful sensations produced by the presence of the tumor immediately subsided, and, with the exception of a slight increase in the frequency and severity of the attacks of sick headache, Mrs. D. was restored to her wonted health.

This condition continued uninterruptedly until the 21st of June, 1865, when suddenly, and without any previous unusual exposure or exertion, she was struck down with a convulsion. Seven severe convulsions succeeded, at intervals of from half an hour to an hour. Mrs. D. remained in a semi-comatose state for some time after the convulsions ceased. She was treated with cupping, blisters, cathartics, tartrate of antimony and nitrate of potash, and ultimately with the iodide of potash and tonics. By and by Mrs. D. seemed to resume her wonted good health, but there was a marked change in regard to her mental condition. She formerly was extremely talkative, but now very taciturn. When asked the reason of her silence, she would reply that she did not recollect anything to talk about. Occasionally she would commence some story and stop suddenly, after uttering several sentences, and when requested to proceed would reply that she had forgotton what she was going to tell. She complained very much of pain in her right arm, and in the cicatrix of the wound made by the amputation of her breast. The cicatrix, however, did not seem to have undergone any change in structure. She made no complaint of headache, and always replied, when interrogated, that her head gave her no pain. In about four weeks from the first attack of convulsions, she had one other of rather a trifling character. Although her appetite remained good until a few weeks before her demise, she gradually lost flesh and became very much emaciated. Her taciturn disposition increased, and ultimately she would answer questions only in monosylables. Her right arm and cicatrix on the breast ceased, so far as could be ascer-

Digitized by Google

tained, from giving pain, but the arm became nearly paralytic, and considerably atrophied. She gradually sank, and died on the 27th of July, 1866.

Sectio cadaveris, seventeen hours after death. Upon removing the calvarium the meningeal arteries were observed to be unusually congested on both sides; longitudinal sinus empty and collapsed; marked fluctuation through meninges of vertical portion, especially of the left hemisphere. Upon opening the membranes above the lateral verticle of the left side a large cavity was presented, formed by the dilatation of the venticle, containing at least three ounces of sero-sanguineous fluid. The lining of the cavity was thickened, of an ash color, but free from indurations, and pressed into the right hemisphere one inch beyond the meridian line. There was softening of the brain tissue in places; adhesions existed between the meninges and substance of the brain on both sides, and also between the convolusions, more marked on the right than on the left side. The central veins were strongly congested. The arachnoid was thickened; some dropsical effusion in the right lateral venticle; slight thickening of and effusion on arachnoid of cerebellum; destructive caries of that portion of the sphenoid forming the cella tucica. The pitutary body was entirely destroyed.

Amputation of Breast. By C. Lomax, M. D., Marion.

Dr. Lomax reports a case of enlarged and lobulated mammary gland, having an open cancerous ulcer, in a lady aet. 48, which he removed in September, 1864. The wound healed readily, and it was hoped the case was perfect. Before the operation was performed the patient had suffered neuralgic pains of the head. Some two or three months after the nervous affliction became more constant and violent, and finally resulting in hemiplegia, and in about five months from the date of the operation she died from evident lesion of the brain. No post mortem examination was had.

Amputation of the Breast. By C. S. Arthur, M. D., Pennville.

In August, 1861, I extirpated a scirrous breast from a lady in this locality, after which she had good health until the summer of 1865, when she noticed a painful tumor forming in the other breast, which gradually increased in size, and became very painful. In June, 1866, I removed the entire gland. Since then her health has been very good, and no appearance of the disease in any other part.

Amputation of Breast. By John Rea, M. D., Newcastle.

Dr. Rea operated on a tumor in a lady's breast in September, 1864. The disease was multilocular, involving two-thirds of the gland, which was removed. But it returned, and he operated again in the following April, and once subsequent to that. Afterwards it returned twice, and was both times

Digitized by Google

removed by Dr. Reesoner, of Sulphur Springs. In the last operation the entire gland was removed, since which there have been no symptoms of its return.

Cases reported from Army practice. By JOSEPH A. STILWELL, M. D. Brownstown, Ind.

Major Gordon Tanner, of the Twenty-second Indiana, was mortally wounded on the 19th day of September, 1861, at Glasgow, Mo., by a ball passing through his pelvis, striking the apex of the sacro-ischiatic notch on the right side, and made its exit one inch above and to the right of the symphesis pubes. Twenty-four hours after, he had a free evacuation of the bowels and bladder and showed no sign of blood or disturbance from the wound. Eight or ten days afterward, the attending surgeon, Dr. Newland, reported a strong urinous smell from the place where the ball came out. In that case the ball must have impinged on the walls of the bladder and caused the coats to slough. Dr. Newland said he died of "blood poison," from absorption.

At the battle of Perryville, Ky., October 8, 1862, Charles Hight, Lieutenant Company K, Twenty-second Indiana, had a clean gunshot wound carrying away three-quarters of an inch of the right tibia, about five inches from the ankle joint. He obtained a useful leg, with good osseous union, I suppose, from the good use he put it to when last heard from. Apropos of the above is the case of Lieut. Colonel Wiles, of the Twenty-second Indiana, who had the same space of bone carried from his right radius at Rome, Ga., May 17, 1864. He is now keeping drug store (Wiles & Reynolds) in Indianapolis. I do not think he ever has had good use of his arm from the destruction of muscle by the ball and inflammation. The ball passed back and deflected to the inside of the humerus.

At Perryville, two cases were brought in too late to operate with balls in a knee joint of each. Both got well and went away walking, on stiff knees of course. The balls were never removed. The limbs were not stayed and I remember of no peculiar dressing. The swelling was general in one since, I think, but for a few days only.

Two others, at the same place, were shot through the neck almost precisely alike, close to the base of the skull, cutting both sterno mastoid muscles in each, without any injury manifested by the blood-vessels or pneumogastric nerves, but with almost complete paralysis of both extremities. Both got well in four months, the progress of recovery being uniform in each.

After the battle of Chickamauga, September 20, 1863, I had ten cases of gunshot fracture of the thigh; nine of them were shipped between that and the 25th day of December, 1863, with limbs that they could handle exceedingly well, that is, could shift with the individual force of each to any position when allowed. They were all treated with Physics long splint, were good young subjects with clean wounds without comminution. One died of

Digitized by Google

pyemia whose prospects at first seemed equal to the best of them. There did not seem to be over two inches of shortening in any of them.

I used a sound leg to splint a fractured one in a few cases for temporary rest and change and with great benefit in transporting from the field.

In two cases I tried the use of linseed meal and gum camphor in moist gangrene, with the result of restoring life to a sufficient surface to prove its utility. It restored the vitality to the second phalanx of a thumb that had the end shot off, and set up a "line" at the base of the toes on a foot that would otherwise have been all sacrificed, caused by disturbance of the circulation from a shot through the calf.

I was very unfavorably impressed with resections while in the army, and think I would not resect there again only in very favorable cases. Their prospects of usefulness were very problematical. Since my return I have seen several cases that might have the permanent support that is frequently given in treating ununited fractures of the thigh and leg.

Cases in Army Surgery. By C. S. Arthur, M. D., Pennville, Ind.

Dr. Arthur gives a summary report of several cases of Pirigoff's modification of Syme's operation, five of which were successful, giving the patients very useful limbs. Of the two unsuccessful cases, one died with erysipelas. Extensive sloughing in the other necessitated amputation of the leg, which finally recovered.

Two cases of Chopart's operation, both successful.

Four cases of trepaning for gunshot fractures of the skull, three of which recovered.

One case of gunshot wound of the liver and right lung which, after a very protracted illness, recovered with fistulous opening from which bile was continually discharging.

Gunshot Wound of Knee Joint. By H. Strong, M. D., Rockford, Ill.

A. B., aet. 45, private Ninetieth Illinois, in battle of Missionary Ridge, was wounded by a musket ball upon the outer side of the knee joint. Without penetrating, the ball cut the skin some two and a-half inches in length. The wound was not exceeding three lines in depth across the tuberosity of the tibia. With a full understanding of the danger of gunshot wounds in the knee or elbow joint, and the many fears expressed by old experienced surgeons, the wound appeared too slight to justify amputation. Cold water dressing was applied, and the patient was comfortable for eight or ten days. Gradually the knee first, then the limb below, and finally the entire thigh swelled, and fever with loss of appetite and general constitutional disturbance set in. On or about the twentieth day it was evident that the patient was failing and could not last many days. On consultation it was the opinion that he would probably die

Digitized by Google

should the limb be amputated—certainly, without it. I reluctantly amputated at the lower third of the thigh, about 8 A. M. The flesh composing the flaps was puffed from infiltration of the cellular tissue with air. He bore the operation very well, and on my visit the next day was smoking his pipe, which he said was the first he had relished it for ten days. Four days after the operation he was put in an ambulance and carried four miles over a very rough road to Chattanooga, where he was placed in a hospital car and taken to Nashville. I saw him perfectly recovered some six or eight weeks after. On dissection of the limb there was found a crack or fissure clear through the tuberosity of the tibia, pus within the joint, and in several places beneath the muscles of the leg—not in large quantity, but in a number of points or nuclei. I consider this case teaches or confirms the truth of the adage that "appearances are deceptive;" and also that the "vis vitæ" is greater in some than in others. I doubt whether you or I would have recovered from a secondary operation under such circumstances and surroundings. A case of extensive resection in a Captain living near me, where ten inches of the alva were removed. Also, that of Lieut. Col. Stewart, shot through the body, and that of Captain Murphy, where the ball entered two inches below and one to the right of the umbilicus, and from whom I took the ball with a fragment of his blouse, one inch from the spine. Also an abdominal section made with a knife in a drunken brawl, extending from Poupart's ligament above the umbilicus, severing the cartilages of three of the ribs, all of whom recovered; show just what nature will sometimes do. Colonel Stewart was kept twenty-one days without an evacuation from the bowels, and on about as little food as would sustain life.

Ligation of Brachial Artery. By Isaac T. Cann, M. D., Evansville, Ind.

There was a soldier who received a flesh wound of the arm, four inches above the elbow, at the battle of Chickamauga. Some eight days after hemorrhage occurred, with forcible jetting of arterial blood. An incision was made, and the artery ligated four inches above the wound. The limb was dressed with a firmly applied roller bandage. The temperature of the forearm became greatly reduced, and the limb œdamatous. Under the employment of stimulating applications and dry heat these symptoms disappeared. In twenty-one days after the operation the arm was reduced one-third below its normal size. The strength gradually returned, and the patient was finally discharged with a slightly atrophied but useful limb.

Gunshot Wound of Lung. By the same.

Dr. Cann reports another case of gunshot wound received at the battle of Shiloh, in which the ball, penetrating the right thorax, between the second

Digitized by Google

and third ribs, near the sternum, and passing backward and downward through the lung, made its escape by the right side of the fourth dorsal vertebra. Cutting pains in the chest, with dyspnœa and spitting of blood followed. He was sent to U. S. Military Hospital at Evansville, and placed under care of the reporter. After repeated attacks of hemorrhage from the anterior wound, and profuse and protracted suppuration, the patient recovered. Some six weeks after recovery, while awaiting his discharge papers he was seized with paralysis, and in twenty-four hours died. Upon post, mortem examination only a small portion of the wounded lung was found, and that occupying the upper part of the thorax. This, with a number of similar cases observed by the doctor, led him to the conclusion that in wounds of the lungs *all that portion below the wound is removed by suppuration and absorption!*

Resection of upper extremity of Humerus—Two Cases. By D. W. Voyles, M. D., New Albany, Ind.

I have met, in private practice, two cases of considerable interest, in establishing the utility and usefulness of a limb saved by conservative surgery. These two cases were so nearly alike in respect to all the details of the operations undergone, together with the results, as to be of more interest than usually appertain to so limited a number of cases in the establishment of any fact in Medicine or Surgery.

In both cases the operation consisted in the removal by exsection of about four or five inches of the upper extremity of the humerus. Both cases were men of more than ordinary muscular development; of sound constitution; of an age from 28 to 32; had served in the field until discharged because of disability from wounds incurred in battle. In both cases the flesh wound healed promptly enough, but being men of meager circumstances, were compelled to earn their living by manual labor. In one case the result was that the arm did effective service, but being greatly abused by over exertion, in such muscular labor as chopping wood, hauling rails, and building fence, had on some four or five several occasions taken on suppurative inflammation, resulting in abscess, discharging immense quantities of pus. These abscesses did not result from bone fragments, as the most searching investigation failed to discover any in the pus discharged or in the abscess, but were evidently the result of irritation set up by the loose ends of the humerus acting like a lever, during violent manual exercise, in separating and bruising the muscular fibers of the contiguous muscles.

The other case was similar in all its details, but the formation of abscess had not recurred so often—only twice since the healing of the original wound—but, like the first, the inflammation always followed, or was traceable to undue physical exercise of the debilitated limb.

From these two cases I have inferred, so far as any inference can safely be drawn from such a limited number of cases, that the practice of conserva-

Digitized by Google

tive surgery, especially on the upper extremities, is a great improvement, and that, although a limb may be deprived of several inches of its bony stay, yet its usefulness to a very great degree may be preserved. Still the operating surgeon should always fully impress upon the mind of his patient the important fact that an arm deprived of a part of its bone is, while useful in the discharge of many light duties as a limb, a weakened and enfeebled member of the body, and must at all times be favored as such, and that to impose upon it such heavy burdens as only a strong arm can sustain is to keep in constant jeopardy the whole limb.

Digitized by Google

REPORT ON DISEASES OF WOMEN.

BY THEOPHILUS PARVIN, M. D., INDIANAPOLIS, IND.

The special study of diseases of women is indicated in the earliest records of medicine. Hippocrates not only devotes one of his *books* to their consideration, but in his *predictions* makes several references to them. With an exclusiveness not quite in correspondence with modern pathology, the father of medicine declares "*morborum omnium qui muliebris vocantur uteri in causa sunt.*" To him we are indebted for the faithful description of puerperal fever, and for the suggestion of medicated pessaries, (see Simpson's Obst., 1st series, p. 98); he also describes uterine inflammation, displacements, etc. and paralysis consequent upon uterine disease; even the recognition of uterine hæmatocele has been claimed for him by a recent *French writer.

The author of an admirable treatise on *Uterine Disorders*, (Dr. H. G. Wright. Uterine Disord. London, 1867), suggest that the law of Moses, "who was skilled in all the knowledge of the Egyptians," so far as that law, in its rules and observances, related to the hygienics of women, was an evidence of the advanced condition of Egyptian medicine. Very probably too much that is attributed to Hippocrates had its origin in an age long anterior to him, and from a people other than the Greeks, for the earlier Greek physicians derived much of their knowledge from the Egyptians.

The most illustrious name which next meets the student of gynecological history is that of Galen; he has given very minute descriptions (Becquerel. Traite Clinique des Maladies de l'Uterin, &c. Paris, 1859), of some of the diseases of the vulva and of the uterus, and is the first medical author who refers to the speculum vaginæ (Wright; op. cit.) as a distinct instrument from the speculum ani. Doubtless Galen's knowledge was, to no inconsiderable extent, derived from the Alexandrian school, which, for nearly a

*Voisin. We apprehend, however, that no one can read the three cases taken from Hippocrates, which are brought forward in support of this claim, and regard them as having any value. See Bernutz, *Clinique Medicale*, &c., *tome premiere*, p. 348.

Digitized by Google

thousand years, was the most illustrious in the world. At this school Galen spent some time, being, for a season, the pupil of Heraclianus, (Med. Prof. in Ancient Times, J. Watson, New York, 1856), a professor of whom he speaks in the highest terms.

Aretaeus wrote upon diseases of women. Aspasia prepared a treatise for the instruction of midwives, but it is known only by the reference made to it by Aetius. Moschion is the author of a work upon obstetrics, puerperal diseases, amenorrhœa, leucorrhœa, uterine hemorrhage, uterine inflammation, *etcetera*.

But the most voluminous and valuable writer among all the ancients, upon diseases of women, was Aetius; indeed, it has been declared probable that his treatise is the only authentic and complete one on the subject now extant, out of all those which were written at any time anterior to his death. It is somewhat remarkable that in three valuable *French works upon diseases of women, all published within the past ten years, Becquerel, Nonat, and Courty, in only one, in the historical sketch of the subject, is there found, and this but an allusion, any allusion to the labors of Aetius. It was reserved for Dr. H. G. Wright, whose recent work is marked, not only by eminently rational pathological and therapeutical views, but also by the graces of a classic style, and by thoroughness of critical research, to point out how much knowledge upon these topics was possessed by this famous Alexandrian author.

Aetius was a native of Mesopotamia, a christian, and is supposed to have flourished in the middle of the sixth century, at Alexandria.† More than three centuries before the christian era, this city, which, for a time, rivalled imperial Rome in population, magnificence, and wealth, was founded; here the trade of Europe and the Mediterranean, with Persia and the far East, poured its countless treasures; the creeds and philosophies of Greeks and Egyptians, of Jews and Christians; almost the world's wisdom and knowledge, the wealth of observation and of reflection, were gathered here; but especially is it true that "what Athens had been in philosophy, and Corinth in arts, Alexandria continued, for several centuries, to be as a center of medical lore, and even to have studied there was accepted as a qualification to practice." Here was that most valuable library of 700,000 volumes, which, about a century and a half after the day of Aetius, was fired by the infamous Saracen, and entirely consumed—the books perished, but the name of the ambitious incendiary lives, the object of the common execration of all subsequent ages. "Here an industrious compiler labored, his life through, to condense into practical form the literature of the medicine of the period, working among the stores of the great library. His magnum opus is still

*Scansoni, as observed by Dr. Wright, in his bibliography of writers on uterine diseases, makes no mention of Aetius.

†Dr. Watson, op. cit., asserts that Aetius settled at Constantinople. But the preparation of his encyclopedical works upon medicine, to which we shall refer in a moment, could scarcely have been accomplished anywhere else than at Alexandria, so that if he resided at Constantinople at all, it must have been temporarily, and we feel perfectly safe in following Dr. Wright's statement as to his residence.

Digitized by Google

extant, and is, without doubt, the most valuable existing work on ancient medicine." His work is composed of sixteen distinct books, the last being devoted to diseases of women, and it contains one hundred and twelve chapters, some of them being borrowed from Aspasia. (Dr. Watson, op. cit.) Thirty-seven of these chapters treat of pregnancy, of parturition, and of suckling; six on various kinds of ulceration of the womb, three on abscesses, two on displacements, two on obstructed and imperforated uterus, seven on growths occurring in the vagina or uterus, and eighteen chapters on menstruation and its disorders. "He has special chapters for hysteria, fibrous tumours, pelvic abscess, hæmatoma, displacements," etc., and devotes one very long chapter to inflammation of different parts of the uterus and its treatment. He describes digital examination, both vaginal and rectal, and their uses; he refers frequently to the speculum, both in diagnosis and treatment; he is the first author who described calcareous tumours of the uterus, tumours which we now know are the result of the degeneration of round fibroids, (Klob's Path. Anat. of female sexual organs, p. 172.) In the treatment of uterine diseases, Aetius frequently recommends medicated pessaries. and for these "he gives upward of a hundred formulæ;" *sponge tents are recommended for dilating the cervical canal; "in cases where the canal of the cervix has been imperforate, a tin tube is to be inserted, in order to maintain the passage, and a speculum subsequently employed, any exuberant granulations being touched with verdigris; the importance of injections, the use of hip-baths, both plain and medicated, the employment of the douche, and application of fumes and vapors, by means of a reed introduced into the vagina and connected with a vessel containing the medicated fluid, are all mentioned as ordinarily employed in practice." It is somewhat surprising that with the evidence of extensive knowledge of uterine diseases, much of this of practical value, in this work of Aetius, Courty should write, "Le bilan de l'antiquite se redusait, parait-il, a des connaisances bien incompletes, lorsque science se refugia chez les medecins arabes."—*Traite Pratique des Maladies de l'Uterus, &c.* Paris, 1866.

In 640, the splendid city, with its treasures of learning and science and art, fell into the hands of the Saracens, under the Caliph Omar, who ruthlessly commanded the destruction of the famous library, saying, "If these Grecian books agree with the Koran, they are useless, if not, they should be destroyed."

"After the dispersion of the Alexandrian school, the professors of medicine, though scattered, were still received with honor by their Moslem conquerors;" "Captive Greece took her captor prisoner," says the Latin poet, in allusion to the influence of Grecian art and literature upon the Roman mind, and so the Arabians, by the influence of these teachers, laid the foundation for that medical fame which was possessed by them for centuries above all their contemporaries. But of course nothing could be learned, and nothing taught, which conflicted with the Koran; and this sacred work forbade dissection of bodies, nor would the Mahommedan creed permit women to be examined by

*"Compressed Sponge is a very old surgical appliance, but in uterine therapeutics it is of comparatively recent date," etc.—*Sims' Uterine Surgery*, p. 47.

Digitized by Google

men. Obviously progress in anatomy was impossible, and as the event proved, no progress was made in gynecology; whatever medicine owes to Rhazes, and Avicenna, and other famous names in the Arabian schools, in regard to the study of diseases of women, there is no debt whatever. Surely these centuries, when Arabian medicine was in its glory, when woman had the exclusive opportunity of studying the diseases of her own sex, presented her the grandest opportunity she ever had in all the world's ages, to establish her claim to be the suitable medical adviser for woman! The talent given was buried, and when a subsequent age demanded its own with usury, scarce even the former could be found.

When "the first Christian school of medicine was established at Salerno, almost everything was borrowed from the Arabians;" and then, probably, the influence of the impossibility of obtaining a practical knowledge of diseases of women among the Mahommedans, for a time in this new field paralyzed all efforts at progress, at any rate for a long while authors (Courty) were content to write from books, and not from personal observation. Without delaying to refer to the labors of Primerose, Fr. Hoffman, Albertus, Morgagni, Mauriceau, (Mauriceau was the first to point out the uterus as frequently the source of leucorrhœo,) and others, we come to Astruc, who about one hundred years ago published a treatise on diseases of women, which probably was the best of the century, or indeed for ten or twelve centuries. Astruc divided these maladies into two classes; first, those which are caused by the menses; and second, those which depend upon the state of the uterus. He advises the use of the speculum in certain cases, discusses nymphomomia under the designation of *furor uterinus*, and. with an excess of modesty, in Latin, though the rest of the book is written in French. Twenty years subsequently, Chambon wrote upon diseases of females under the three following heads: First, diseases of girls, second, of women; third, of pregnancy. Vigarous, Professor at the school of Montpellier, in 1801, published an "Elementary Course upon Diseases of Women," &c., in which these maladies were classified as affecting, first, virgins; second, married women, and third, old women. A few years subsequently, Recamier revived the use of the speculum, and, with the improvements effected in the instrument by himself and others, in a comparatively short time, considering the slowness with which the use of the speculum became generalized, a great change was effected in uterine pathology. Then was the age of the Broussaian doctrines —inflammation was the key to all pathology—cancer, tubercle, almost every disorder of the organism was inflammatory in character, and was to be met by antiphlogistic treatment. And this creed was then so woven into the pathology and the practice of uterine disorders, that probably it still holds too dominant a place. For local antiphlogistic treatment, the speculum presented admirable facilities—leeching, scarification, and cauterization could be readily effected through it. True, so far as the first of these was concerned, Zitus Lusacutanus, in 1642, and Jerome Nigrisoli, in 1665, had recommended the application of leeches to the neck of the womb in the treatment of lochial suppression; but their method was to tie a thread to the leech, introduce the

Digitized by Google

animal into the vagina, and then trust to its instinct to direct it to the right place—a fullness of faith which is quite equalled by many a medicine-giver at the present day who has unbounded confidence in the elective affinity for special organs of most of the articles of the materia medica.

It is not necessary nor is there time even to enumerate the various contributions to uterine pathology during the present century; many of the most valued contributors have been among the most famous and ablest of our profession—some of them are still living. Undoubtedly we can claim at the present day a much greater amount of knowledge upon these diseases than has been the possession of any previous age, even after subtracting from this amount all that was known to the most advanced students, and after crediting many things to the earlier physicians which lost in the lapse of time have been patiently re-discovered almost or quite within our own day.

Yet notwithstanding this abundance of literary material which invites the student of diseases of women, he can pursue his investigation but a little way without becoming painfully conscious of an utter want of harmony, nay, of downright discord among different authors. Relief for his perplexity may come in the sneering sceptic's question, "What is truth?" or in becoming the partizan of the peculiar creed of some one of the great masters; or, best of all, he may do his own thinking and believing, with true catholicity of mind accepting from all whatever shall commend itself to his reason and experience, but finding freedom from error in none. "In early times there was no wide dissention as to the pathology of uterine disorders, to the great comfort of the learners, who knew what to believe; for the number of those content to think for themselves, who pin their faith to no man's sleeve, was then and is now comparatively small. The student of modern uterine pathology, if he accept every direction written for his observance, and be guided in his practice by the latest propounded views, will assuredly be worse off than the men of old, who acknowledged their ignorance, trusted very much to nature, and were content to leave bad alone, lest bad should be made worse; for the clash of modern theories about uterine disorders, and the bitter controversies that followed, have rather tended to confine than to guide." (Dr. H. G. Wright, op. cit.)

The wide discrepancies existing among some of the leading gynecologists must have struck even the casual reader of treatises upon diseases of women. One celebrated teacher and author (Hodge) dwells upon the prime importance of uterine displacements as the key to uterine disorders; another (Bennet) finds inflammation, more especially of the neck of the womb, the essential element of such disorders; one (Lee) considers ulceration of the os uteri so rare, another (West) so common—and each observer is fortified by numerous statistics—as to be of little or no consequence in uterine pathology; one (Tyler Smith) sees in leucorrhœa an explanation of very many uterine diseases, while another (Tilt) insists especially upon the important *role* which the ovaries play in the maladies of the female sexual organs; one class—and here is the most distinct dividing line—give little or no heed to the local disease, believing and teaching that this is but a fragment of a constitutional

Digitized by Google

malady, and attention to the latter must be the way to remedy the former, while another is diametrically opposed in faith and practice. *Quis componet tantas lites?* *Ultraism* is a bane and hindrance to progress. If we would remember that truth is many-sided, and no one mind capable of monopolizing its vision, we would probably attain to clearer theories of disease and more successful rules of practice. A man should not keep his eye fixed on a single dim, distant planet, but must endeavor, so far as he can, to sweep the whole horizon of starry light.

In such a spirit the physician should study all diseases, those of which we are now speaking included. True, a man may ridicule the exclusive practitioners of this or that school; he may utter right pithy sentences, that shall be received with laughter and applause by his medical auditors and run the rounds of medical journals, in condemnation of this or that ultraism, but all this satire and all this rhetoric have neither conducted him nor others any where nearer the truth, and the earnest inveigher against ultraism often becomes an ultraist in his condemnations. The summer showers that refresh the thirsty earth, and make the dying vegetation live again, have been gathered from a myriad sources, and a man who would be thoroughly fitted for his work must drink from many fountains.

While, then, we accept various teachers to guide us in a knowledge of these diseases, wholly relying upon none, endeavoring to select the good and true from all, there is one study which ought to be insisted upon as of prime importance, and this is *physiology*. We have already spoken of the advance made in uterine pathology in the present century—and, in spite of discords and disagreements and clashing creeds, we recognise that advance as very decided—and we believe that the most important agent in promoting such advance is an increased knowledge of physiology. We to-day are better pathologists and therapeutists than our predecessors, because we are better physiologists.

This study should not only embrace extra-uterine life, but also the physiological development of the sexual organs in intra-uterine existence. In this latter we find not merely the solution of the problems of teratalogy—for each point of arrest of normal development corresponds to a vice of conformation or to an anomaly of form, the majority of teratalogic states representing temporary embryonic condition—for thus we may be guided to a knowledge of perversion or absence of function in extra-uterine life; "how the bones grow in the womb of her that is with child," how all the parts of this wondrous microcosm are "curiously fashioned in the secret places of the earth," may have been insoluble problems to a past age, still are insoluble to this age in the essential mystery of life, nevertheless we may trace the steps of these processes, day by day, week by week, month by month. The study of embryology, as it relates to the female sexual organs, a study which finds no place, however, in most treatises on diseases of women, should be neglected by no physician. It is one of very great interest, and we believe of no inconsiderable practical value. Did time permit, we should be glad to show that from three chief centers of organic evolution the sexual system proceeds, and

Digitized by Google

that arrest of development expressing itself first in form-anomaly, then in function-failure, may affect one or more of these central zones at an earlier or later period of fœtal life.

But it is especially in the study of the peculiar functions of the female, that we find a valuable light to guide us to a knowledge of many of her diseases. Undoubtedly a grave and mischievous error of so-called uterine pathology, has been attaching undue importance to the uterus as the exclusive theatre of abnormal conditions. As the uterus itself has a "changing anatomy," (Courty, *op. cit.*) form, position and size varying with the different periods of life, and with the exercise of special functions—*e. g.*, the uterus of the child is not that of the adult virgin, of the latter not that of the married woman, of the menstruating woman not that of her in the interval, nor neither of her after the meno-pause—so too, and some of these very illustrations are appropriate, the uterus has a changing physiology, at one time and then only, *i. e.*, pregnancy, it is the most important of the sexual organs, while at another time the mammary glands are the most important, and at still a third the ovaries. But further: This exclusive view finds a correction in the study of the most characteristic function of woman, a function which is not the work of a single organ but of several, not a simple but a complex phenomenon—I mean of course menstruation. It would be more appropriate to speak of this function as consisting of a series of concurrent phenonema. In studying its different stages we learn the etiology of many uterine diseases—of course we here use the word uterine more in its common than its specific sense—and we find too a type and epitome of pregnancy, and also of some of the pathological as well as physiological changes to which the uterus is subject.

The more obvious of these concurrent phenomena may be summed up as determination of blood, congestion, and hemorrhage. But these are not all. The ripening of an ovule, the rupture of a graafian vesicle, the grasping of the ovary by the fringed extremity of the oviduct, adhering to the former by a fine membrane, and the transferrence of the liberated ovule to the uterine cavity—these are likewise essential parts of healthy menstruation. Observe at how many different stages and parts of these complex events we may have interference, arrest of progress, and physiological process cross the border line and become pathological result. The vesicle may not rupture, but become by and by transformed, in connection with younger vesicles in the ovarian stroma, into a polycystic ovarian tumour. The fringed extremity of the oviduct may not be accurately or at all applied to the ovarian surface, the ovule impregnated may escape into the peritoneal cavity and there be developed, the final result being with almost absolutely certainty the death of the subject; or the menstrual blood may pour into the peritoneum instead of into the vagina, causing one variety of hæmatocele. The determination of blood to the generative organs may not occur, and hence one variety of amenorrhœa. The congestion may be excessive, and hence congestive dysmenorrhœa; the evacuation may be scanty, and consequently permanent engorgement, or hypertrophy general or local, of one or more tissues of the

Digitized by Google

uterus; the discharge may be excessive, menorrhagia. So too congenital or acquired obstruction of the vaginal or uterine canal, or orifice of either, may prevent the last act in the physiological drama, the evacuation of the menstrual flow—secretion or hemorrhage has taken place, but excretion is mechanically impossible; here, too, a hæmatocele is a possible result, and consequent upon this hæmatocele is a pelvi-peritonitis.

Although menstruation is a physiological act, and in the healthy woman should occur without any pathological disturbance of her condition, yet it places the internal sexual organs, especially the uterus, in a condition very different from "that equilibrium which is the law of health of all other organs," and very slight causes, moral or physical, may permanently destroy the balance.

We all know, too, how injuriously affected certain pathological states of the uterus are by the occurrence of menstruation, while we look for those same conditions to cease or at least be entirely quiescent after the meno-pause, *e. g.*, uterine fibroids.

Menstruation, too, often reveals the existence of disease—*e. g.*, a polypus which evades the search in inter-menstrual periods may become entirely accessible during menstruation: other illustrations will be quite obvious.

Time and space will not permit our enlarging further upon these points in the physiology of the uterus and its associated organs, nor entering upon new ones, investigations of all which shed light whose rays converge upon the one great object and end of all studies of disease, the cure thereof.

From what has already been said in regard to the phenomena of menstruation, the liability of the internal sexual organs to disease must be quite plain. When, besides, we consider (Nonat, Courty and others.) the position of the uterus—dependent, constantly subject to the pressure of the abdominal viscera, its structure, so vascular, its functions—relative to copulation—to pregnancy, bringing hyperæmia and hypertrophy, the traumatisms to which it is subjected in abortion and in accouchement, we can easily see unavoidable causes of uterine disease. Besides, an organ, as has been observed by others, subject to incessant changes, and liable to absolute injuries, will be very likely to be the point of election for a diathetic disorder. He would be a careless student of woman's peculiar diseases, who did not recognize the important part which woman's psychical nature, in the impressions made upon it, played in the production or in the prolongation of such diseases. How often, for example, has some sudden shock, whether of joy, or sorrow, or fear, caused acute menstrual suppression, and this led to pelvi-peritonitis, uterine displacement, etc., etc. The master dramatist has pictured perfectly the genesis, from a moral cause, of chlorosis, in that passage too familiar to be quoted, commencing "She never told her love," &c. To know woman's diseases, not only etiologically but therapeutically as well, we must know her not merely as to her physical, but also as to her psychical nature.

Undoubtedly, very many of the diseases of woman are preventible. Fashion and ignorance can have justly laid at their doors very many of her sufferings. The lady of fashion, neither in dress, in diet, nor in exercise,

Digitized by Google

complies with those hygienic laws upon which health depends. In the olden time a daughter was not expected even to rise from her seat at the entrance of her father, strongly as reverence for parents was observed, because in that euphemism for which these days have scarcely anything more expressive, the custom of women was upon her; but now the menstrual period is no hindrance to mingling in the excitement of the theatre, the opera or the dance—the greatest psychical disturbances, or physical fatigue, late hours, indigestible food at an unseasonable time, these are some of the perils to which women voluntarily expose themselves: in some instances where the flow should be so profuse as to be annoying, a cold foot or hip bath, or a similar vaginal injection is often resorted to. When the holy responsibility of maternity comes to the woman of fashion, she too often casts that responsibility upon another, and has her child nourished from that other's bosom: very often such a mother pays the penalty of her infidelity to maternal instinct and maternal duty, in disease of the womb, especially sub-involution. Of that frightfully common crime, abortion, abortion needlessly and voluntarily produced, as it is found among too many married women, a cause of death frequently, but still more frequently of long continued disease, it is scarcely necessary to say a word so familiar must physicians be with the fact and its train of terrible evils. Possibly we as physicians would materially diminish the temptation to this crime, were we to resort more generally to the administration of anæsthetics in labor; our firm belief is that scarce one in a hundred who might not be conducted safely through the martyrdom of maternity with comparatively little or no suffering, by the judicious administration of ether, ether especially, or of chloroform.

How little do women know of their own peculiar organization and functions! How little do mothers teach, of that little which they have learned from their own painful experience, their daughters! We believe that the major part of girls, when the distinctive mark of the change from girlhood to puberty, the menstrual flow, first occurs, are found utterly unprepared for, without any expectation of this event. The consequences, physical and mental, even if no active means, as too often they are, are taken to suppress the discharge, of such surprise, can not but be injurious.

Nor can the faithful physician be silent as to the crimes of men in the causation or in the aggravation of uterine diseases. Pure and virtuous wives have been made victims of syphilitic disease from the unhallowed lust of their husbands; many a pregnant woman has had her sufferings intensified, especially her nausea and vomiting, by the passion of her husband, which would not cease its exercise when the purpose for which it was given had been for the time accomplished, the procreation of offspring; many a lencorrhœa, many a menorrhagia has found its continuing if not its exciting cause in ill-timed or continued sexual indulgence. Widowhood, or prolonged absence from home, let it be at a watering place or a so called water-cure, has often accomplished a cure in cases of uterine disease, where skilled medical art had previously failed.

Digitized by Google

We can not discuss any further the *etiology* of uterine disorders, even with the little that we have said and the much that remains unsaid; but we hasten to present a few principles in their *therapeutics.*

[The therapeutical portion of this essay we omit, for fear of occupying undue space in the Transactions.]

While the physician may justly rejoice in the rich literary accumulations in gynecology, the more he engages in this study the more forcibly is he impressed with the thought that the unknown is vastly greater than the known; the *ultima thule* lies far beyond the adventurous footsteps of any previous explorer, or of himself. One of the ablest investigators and writers on diseases of women (Bernutz), a few years since declared that even with more than twenty years exclusive study of these diseases, he was not capable of writing a dogmatic treatise upon them, and that all he had learned was little in comparison with that which he did not know, or knew too superficially to make a satisfactory exposition of it. (See review of Bernutz and Goupil's Clinique Medicale, &c., Am. Jour. Med. Sci., July, 1867.) We can not apply to these studies a remark similar to that made by a profound philosopher, "the end of all philosophy is a learned doubt," for in their pursuit we seek certainty of knowledge; but we can say all the conquests yet made are little in comparison with the vast territory of doubt and uncertainty which remains for physicians to conquer. We apprehend, too, that there will be no lack of faithful toilers in this extensive territory. The progress that has been is but earnest of that which shall be—while the profession eagerly works and waits for every increase of scientific knowledge. This eager desire, as we have written for publication elsewhere, (Am. Jour., July, 1868, p. 165,) is not the simple thirst for knowledge, nor the mere prompting of general philanthropy, of which medicine in its best estate is one of the highest manifestations, but rather is expressive of a direct, immediate and personal interest in woman herself, who, out of the depths of her physical suffering, looks up to us for relief or release. "That man is to be pitied," says Coleridge, "whose own mother has not rendered all other mothers sacred to him;" and woman, whether mother, wife, sister or daughter, wears somewhat of a consecrated character to the true physician, and to know, to cure or to palliate her diseases are the promptings of every noble and chivalric impulse in his nature.

Digitized by Google

PLACENTA PRÆVIA.

BY G. W. MEARS, M. D., INDIANAPOLIS.

In departure, somewhat, from the prescribed form of a report upon Obstetricy, the duty imposed upon me at its last meeting, I propose to ask the attention of the Society to some suggestions in reference to a very interesting specialty in that department, trusting that the views I shall present on the management of *Placenta Prævia* (the specialty alluded to,) may be regarded, if not entirely new to the Society, at least of sufficient importance in their practical bearing to compensate for the lack of a more general consideration of the subject of midwifery.

In the early part of my professional career I was in the habit of applying in my practice the rules and suggestions of my collegiate instructors, rarely venturing out of the prescribed routine, yielding, indeed, by almost implicit faith, my judgment, to the views of those whom I was taught to revere as veterans in the service in which I had then just embarked.

Observation and experience, however—those abler and more reliable expounders of truth—soon began to teach me that neither reputation nor success in the profession which I had embraced were guaranteed by blind submission to the opinions and views of other men. I discovered, in a word, that the art of healing was progressive, and that in order to maintain position with my compeers in the profession, a modicum of self respect, and confidence in my usefulness, I must *not* accept the opinions of others, especially on subjects of great practical interest, however plausible or popular the theory, without the exercise of discretionary power—without deciding for myself as to their practical application and use, whatever the prestige of authority by which such speculations were endorsed. Actuated by these considerations, and greatly dissatisfied with the results of my practice under the old and once popular theory of Podalic Verson as a remedy for unavoidable hemorrhage in placental presentation; and disappointed, also, in the hope of a more successful agency promised by the application of the theory of Prof. Simpson, I

Digitized by Google

was driven to a trial of the *tampon*, recommended some forty years ago by Prof. Wigand, of Hamburg, as an expedient which seemed to present some advantages over other modes, while it was free from many of the very decided objections to either of the two methods now most in practice, and it is the object of this paper to urge upon the Association a candid examination of this treatment, with a view to its revival in some modification, as more rational, more philosophical, and, in my judgment, infinitely more safe than any method yet known to the profession.

Before attempting to define the peculiar advantages of this over other remedial agencies, I desire to present some of the reasons for my abandonment of the old practice.

Under the most favorable circumstances, I have found the attempt to introduce the hand with the view to rupture the membranes either *through* the placenta, as is recommended when the center is over, or nearly over, the cervix—or around the edge, when the covering is partial, as dangerous, in view of the fact that it is always necessary to disturb the coagula collected in the os and cervix uteri which, while unmolested, serves as a temporary staunching to the bleeding vessels. If the subject be greatly exhausted the hemorrhage from this cause, whether greater or less in amount, is always alarming and sometimes fatal.

But if this much be safely accomplished, and turning is decided upon as necessary, the danger is greatly enhanced, especially when, as is often the case, it is discovered that the os and cervix are not sufficiently dilated for the easy introduction of the hand, while expediency demands immediate version and delivery of the child. The fatal effects to both mother and child in this dilemma are almost certain; and as circumstances of the kind are of frequent occurrence, the enormous percentage of fatal results need not be the subject of wonder.

Dr. Trask gives the number of deaths, when turning has been employed, as 59 to 200, or about 29 per cent. Dr. Simpson states, "one hundred and forty-four (144) women were lost in 421 cases of turning, or about 35 per cent." "These results," remarks Dr. Hodge, "if to be relied upon, could certainly not have been anticipated, as they show, notwithstanding all the confidence placed by the profession in podalic verson in cases of placenta prævia, yet that the rate of mortality has not been diminished by that treatment." Under the most favorable circumstances, that is, when there has been a dilatable state of the os and cervix uteri, it has been my misfortune to witness two deaths of both mother and child in each instance—one, while in the very act of turning, and the other after turning, but before the head could be delivered. To gentlemen whose feelings have suffered the unspeakable torture of such a test of the theory, I need say nothing in condemnation of the practice. Thus much for the system of rupturing membranes, turning, and delivering the child as a remedy for unavoidable hemorrhage.

As my first objection to the Simpsonian theory I have to suggest the difficulty, amounting in some instances nearly to impossibility, to accomplish the proposed detachment, as in cases of primipara births, where it is often, in

Digitized by Google

early stages of labor, out of the question to introduce the hand into the vagina; and many times in cases of ordinary labor it would be found most embarrassing and difficult to force even the index finger through the os and cervix uteri, at periods in the progress of labor when the hemorrhage may be very serious. In all cases, indeed, of unusual rigidity of the os it must be found a tedious, painful and difficult task to use the necessary manipulation to effect the separation of the entire mass—and the author of the system in question insists, be it known, upon the use of the hand and fingers *only*, (objecting to instruments,) as the means of accomplishing its removal; hence Dr. Radford advises the restriction of the operation to those cases only in which the os is fully dilated. With such restrictions it is obvious that whatever the merit of the theory may have, *per se*, it would promise little advantage over its rival system of turning and delivering immediately, with the view to the greater safety of the child. The danger, too, from the gush of blood which invariably follows the separation of the placenta would, by the latter course, be prevented.

I object, in the second place, to the plan on the ground of the almost necessary sacrifice of the child thus cut off from all vacular connection with the mother. In reference to this important consideration, the doctor (Simpson) admits himself that he has known of but one single case where the infant survived, unless delivered within ten minutes after extraction of placenta. A poor prospect, indeed, is here presented for the preservation of the child in case of a rigid os, a torpid uterus, or slow and insufficient pains from any cause; and in my experience the efforts of a uterus exhausted by flooding are not characteristically rapid or forcible.

In the third place, I regard the practice of rupturing additional vessels, and thus increasing the number of bleeding orifices, with the view to arrest the discharge from those already pouring out the life-blood of the patient, as irrational and unphilosophical, and certainly fraught with immediate danger, even granting (what I am unwilling to admit,) the possibility of its accomplishing remotely the object claimed for it. The violent separation of the placenta is, according to my experience, always followed by a gush of blood from the patulous vessels, which, under circumstances of extreme exhaustion, may prove fatal to the mother before the contraction occurs, which it is claimed closes the vessels, and thus permanently arrests the flooding.

Admitting the effect of the condensation of the uterine tissues in closing the vascular sinuses which form the channels of circulation between the mother and child, we are not prepared to yield our assent to the doctrine that mere contraction of the uterus in the ordinary throes of labor are sufficient to permanently obliterate those vessels while the uterus remains distended by the presence of the fœtus. In reference to this point Dr. Hodge says: "The question why hemorrhage should cease after the placenta had been separated has not been satisfactorily answered." Our own impression is that it is chiefly due to a condensation of the uterine tissue resulting from the evacuation of the liquor amni. Now it would appear from the Doctor's view that absolute lessening of the calibre of the uterus is essential to that condensation of its

Digitized by Google

tissue. If this then be a necessary condition to the arrest of the hemorrhage, and I believe it to be so, what is to be the consequence of so great an exposure of bleeding surface, when there happens, as is many times the case, to be but a limited quantity of liquor amni to be evacuated. The fact too, must be patent to you all, that in many, very many cases, the discharge of that fluid produces a scarcely appreciable change in the size of the still gravid uterus, this being more obviously the case when the puncture in the membranes has not been made until the head is about to engage in the superior strait, thus daming up, so to speak, the water, until the fœtus is expelled, when it passes off with a rush.

Accepting, then, the rationale above referred to, of the arrest of the hemorrhage in question, we must be excused for doubting whether with a distended uterus it is possible for those ruptured vessels to close, so as not to bleed in the absence of the uterine effort, any more than the same class of vessels in post partum hemorrhage, ruptured by uterine contraction, which become again patulous and bleeding when the efforts before sufficient to expel the fœtus and detach the placenta have not been competent to *condense* the tissue of the organ embracing these vessels.

In the fourth place, admitting that we have a case in all respects adapted to the application of the remedy suggested, (and a very small number will, I apprehend, be found without some one or more of the objectionable complications referred to,) there is still to encounter, as my experience assures me, a greater or less loss of blood in the attempt to dislodge the after birth, which must always jeopardize, and in extremely exhausted cases sacrifice the life of the patient.

Having thus fully presented my objections to the dangerous expedients authorized by what is claimed to be the experience of some of the ablest men in this department of medicine, I turn with pleasure to the contemplation of what I regard as a more rational, less difficult and more successful practice.

The advantages of the tampon are first, that when properly applied it arrests the hemorrhage at once so far as its existence by the vagina be concerned. To what extent the bleeding may continue internally must depend somewhat upon the fact as to whether the integrity of the membranes be preserved, for notwithstanding M. Careaux advises its employment even in cases after the escape of the liquor amni, (enjoining at the same time severe pressure upon the abdomen,) I should have but little faith in its adaptation to such cases. Under all other circumstances its advantages are in my opinion not doubtful.

Dr. Dewees asserts "that in his experience a resort to the tampon is sufficient to arrest the hemorrhage until the os is delatable, and (he continues) I am certain it can never be absolutely necessary to interfere until then."

Now if the tampon is a safe means of keeping the blood in check until the os and cervix are in a condition for manual interference, why endanger the life of child or mother either, until (and I now speak of natural labours) the

Digitized by Google

action of the uterus has forced the head or breech, as the case may be, into the pelvis, and thus renders further manipulation unnecessary.

Secondly, the woman escapes the danger and pain and exhaustion from the operation of turning on the one hand, while on the other, there is nothing to be apprehended from the loss of blood in the act of separating the placenta.

Third, the chances for the preservation of the child must be comparatively greatly increased, and lastly it obviates the need of hurry to get through with the case, delay being of little consequence. The tampon as a general thing should not be removed until forced forward by the presenting part, engaging the placenta in that case, between the two opposing forces which cannot fail to restrain all dangerous hemorrhage.

We do not wish to conceal the fact, and we could not if we did so desire, that this practice has met with strong opposition. Among its enemies is to be classed our eminent countryman the late Prof. Meigs, who lays great stress upon the assumption that the tampon does not arrest the bleeding, but on the contrary, acting merely as a barrier to the escape of blood externally, forces it into the uterus where space sufficient is found for fatal accumulations. That such a result is possible, and may very rarely occur, when the membranes remain intact, I am not prepared to gainsay, but certain it is that those speculations do not appear to be sustained, so far as I have been able to discover, by the report of a single autopsy developing the existence of such internal collections of blood as the cause of death.

Reflecting upon the fact that those bleeding vessels are mere venous sinuses and not arteries upon which we have to make our pressure; and recognizing also the great amount of force applied by the efforts of the uterus from above in active labor, it is to my mind quite easy to conceive of the radical and complete efficiency of the tampon.

My mode of application differs but little from that advised by the author of the theory. On approaching the patient my first attention is directed to the investigation of the condition of the parts involved. To this end, having first evacuated the bladder, I remove so much of the coagula usually present as to allow direct communication if possible with the bleeding vessels.

Whether the effusion be discovered to proceed from the center or circumference of the placenta, I regard as a matter of no consequence, and now at once thrust into the bleeding part a small piece of sponge saturated with the solution of per sulphate of iron previously reduced to one-half its strength with water. I find this invariably occasions a temporary arrest of the discharge, availing myself of which, I immediately force into the passage pledgets of lint, old pieces of soft linen, or raw cotton sufficient to pack the vagina firmly. I secure the retention of this tampon, if the os be found undilated and rigid, by means of a T bandage, and bide my time with greatly increased confidence as to the issue of my case. If on the other hand the os and cervix are found flaccid and dilatable, the necessary force to keep the tampon *in situ* is applied by the hand until by the prompt and free administration of ergot, (given under circumstances of great exhaustion in the form of tincture,) active labor is induced and the case thus soon disposed of.

Digitized by Google

By this easy, safe and simple process, I have succeeded in the last few years of my practice entirely to my satisfaction, in disposing of several cases of what I have always regarded as the most formidable of casualties to which the parturient female is subject, and very earnestly therefore recommend its trial to the members of this Association.

Digitized by Google

INDIANA'S IDIOTIC CHILDREN.

BY H. P. AYRES, M. D., FORT WAYNE, IND.

Man, in the perfection of his physical and intellectual powers, is the crowning glory of creative intelligence.

The highest type of man is the pure christian philanthropist. The noblest act of the philanthropist is the amelioration of human suffering.

The men who have taken the broadest view and put forth the noblest exertions in philanthropic operations, have been physicians.

When pestilence has swept over nations, when death was found in almost every house, the people shrouded in mourning and sackcloth, with fear filling every heart, the physician has stood forth, as a days-man, between life and death. In the carnage of war; in the sighing of the prisoner; in the demented and insane; in the woes and sorrows of the blind; in the calamities and silence of the deaf and dumb; in the hopelessness of the dipsomaniac; in the stench and filth of the sunken debauchee, they have given aid to every humane effort to relieve the distresses of the hapless sufferers. The history of medical men, the observation of centuries, will substantiate my assertions. While we thus claim so large a share of the philanthropic efforts of the world, we are far from ignoring its existence wherever civilization is known. There are sympathies with abject wretchedness and poverty; there are commiserations sent out where distress and suffering abound; hope is made to spring up where adversity depresses, and lights the morrow with beams of joy. But with all these manifestations of philanthropy, one portion of our race has been forgotten. I refer to the condition of the idiotic and weak minded children, not only of the world, but more particularly to those of our own State. There is at present a demand upon the medical profession of Indiana, to take measures to bring about some action by which this portion of our population may be elevated, and taken from their sunken and hopeless condition.

We can only form a proper estimate of the number of this class of human beings in our State, by the ratio in other States and counties, where systematic investigation has been made.

Digitized by Google

It has been found impossible to rely upon census statistics to ascertain the number of idiotic children. The principle difficulty is, the reluctance of parents to let it be known that their children are idiotic Parents, who are surrounded with intelligent, healthy children, forget the thousand parents of our State who, with tender yearnings over imbecile or idiotic children, pass bitter days, and dreary nights, seeking to hide their offspring, in whom they feel the greatest shame and chagrin. Children, who are thus afflicted, usually receive either extreme kindness or the greatest neglect. I have seen tears of deepest sorrow, and laments of the tenderest character, for the death of idiotic children. I have also known the mother's heart to be cold and frozen to any pity for them.

Connecticut, New York, Massachusetts, and Ohio, find, by actual examination, one idiot in every thousand inhabitants; England has the same proportion. Other parts of Europe have a much greater, in one or two instances having one idiot to every twenty-five persons. In the census of this State, made in 1860, there was reported one idiot in nearly every fifteen hundred inhabitants. This is probably an under estimate, owing to the difficulty of ascertaining such humiliating facts from parents. It is undoubtedly safe to take the lowest number found in any State as a basis in estimating the num- in Indiana. The population of our State is about one and a half millions. If we consent to take the census returns, we have one thousand of this helpless, hapless portion of our population, dragging out a useless existence. But if we take the actual explorations of committees in other States as data, we then have fifteen hundred, demanding the consideration and efforts of every philanthropist, to mitigate their condition.

Does their condition demand any effort to change it?

Until within a few years, this portion of our population was assigned to an inexorable destiny; surrounded by circumstances and influences which continually sunk them deeper and deeper into the abyss of vacuity—of helpless, hopeless idiocy. They have been and are looked upon by the world as hideous excrescences of the human family, and are permitted to vegetate and die in a night of darkness.

Garrets, and cellars, and cells, and prisons and chains and cords; abuse, starvation, homelessness, and almost nakedness, were the common blessings conferred upon their wretched existence. Often disowned by father, and ashamed of by mother, without a brother's care or sisters's love, they have been a burden to the world, outcasts from human society and human sympathy. The deeper they were sunken in hebitude—the darker their night—the sooner are they permitted to drag out a worse than brutish existence, without one ray of hope. If perchance some ray of thought breaks through the bands of an uncongenial tenement, giving evidence of a soul which might be lighted up and made to beam with intelligence, it quickly goes out from the want of proper culture, and the child sinks into perfect idiocy.

We may, to some extent, close our sympathies against the miseries of the mature and strong; we may, with some indifference, look upon the middle aged when demented; or see the old man closing his pilgrimage without any knowledge of the joys, or duties, or sorrows, or friends, or charms of home

Digitized by Google

which he leaves behind him, and without one thought or care about his coming destiny. But when helpless childhood makes its appeals, the heart-strings vibrate, and we can not withhold the warmest emotions of the soul. Investigation has demonstrated that one-fourth of all idiots are under twelve years of age—mere children.

If we take the lowest estimate in our State, we have no less than two hundred and fifty children in the deep, cruel slough of idiotic life—two hundred and fifty children, whose day-spring has been but a sad, a cheerless winter. The little rills which so joyously and charmingly burst spontaneously from childish hearts, and give grace and loveliness to the budding mind, rendering them attractive and pleasing to all, have never rippled—have never given one cheery note to life; they have been frozen by the cruel, sad life of idiocy. Thus has it been, thus it is now in our growing, thrifty State; thus has it been throughout the world, until a few years ago, when the banner of hope was unfurled to the idiotic by a few benevolent men, and demonstrations attained that they can be educated, or at least elevated to a higher position in the world. But as a general thing idiocy, or imbecility, are not the only troubles which seize upon these unfortunate beings.

Dr. Wilbur, of New York, says: "Of twenty-five that were received at our asylum, twelve could not speak a single word. Of these six had no idea of language—could not comprehend a single word or command addressed them. Of those who are not dumb three say a few words, and those indistinctly; and still two others, who did not speak till nine years of age, and now indistinctly and with a very limited number of words; seven walked imperfectly; three were subject to partial paralysis; eleven had been subject to convulsions; eight were subject to excessive flow of saliva; seven were utterly inattentive to the calls of nature; five described as very irritable."

Dr. Parrish, of Pennsylvania, reports thirty-three cases as follows: "Epileptics, 11; scrofulous, 12; deformed limbs, 2; unable to walk, 2; afflicted with chorea, 1; paralytic, 1; healthy, 4."

Dr. Patterson, formerly of Ohio Asylum, says: "Of sixteen pupils, who are now inmates of this institution, three could not, when admitted, make known their wants; two could not feed themselves; thirteen could not dress or undress themselves, five were speechless; four others could speak, imperfectly, only a few monosyllabic words, four could pronounce some words, but could not form sentences; fifteen did not know the alphabet; thirteen could not count; two could not walk; and three could walk only a tottering gait."

The Commissioners report to the General Assembly of Connecticut, (Com. Rep., 1826, to Gen. Assem. of Con.) reports as follows: Over one-fifth of the whole number reported are paupers; of the others, a large number are in indigent circumstances. Seventeen families have been reported in which there were more than one idiot. In these seventeen families, there were fifty-one idiots, being an average of three to each family. In two cases there were five in one family. In two or three towns in the State there are families in which parents and children are idiots. In one instance, where three children had been idiots, they had been kept by their unnatural mother in a close

Digitized by Google

room, in the most filthy condition possible, tied with a short rope around their necks, and never suffered to stand or take the fresh air; neighbors had remonstrated, but in vain. It is not surprising that under this treatment two of the three died, one only living to adult age. In the State were found:

Of 159 reported, 86 were stupid and inac ive.

Of 128 reported, 40 possessed no sensibility to musical sounds.

Of 252 reported, 66 could not dress nor undress themselves.

Of 248 reported, 41 could not feed themselves.

Of 225 reported, 99 could not talk intelligently.

Of 147 reported, 103 could not frame a sentence.

Of 226 reported, 171 could not count above ten.

Of 163 reported, 92 were gluttonous.

Of 185 reported, 89 were filthy in their habits.

In other States, where the matter has been investigated, the reports are about the same, sufficiently so to warrant the conclusion, that Indiana has a similar number, sunken in the lowest debasements of demented life; alike deprived of life's necessary comforts, and subject to like diseases, and like infirmities. The same causes which contribute to multiply these abject beings in other States, are as full blown in Indiana as in any State in the Union, and demand as thorough an investigation.

The causes of idiocy are too numerous, and the field of investigation too wide, to enter upon fully, and we will content ourselves by mentioning a few prominent points.

Abject poverty is among the prominent causes. There is a sympathy existing between body and mind; and where the body is badly fed, and poorly clothed, the brain suffers with the rest of the organism. The mind is sluggish, and blunted in its action, and where this is continuous for years, the general character is affected with some degree of imbecility; or if the parent escapes, the effects are entailed upon the children.

"It is said by physiologists, (Commissioners rep to Gov. Mass. 1850,) that among certain classes of miserably paid and poorly fed workmen, the physical system degenerates so rapidly, that the children are feeble and puny, and but few live to maturity; that the grand-children are still more puny; until, in the third or fourth generation, the individuals are no longer able to perpetuate their species, and the ranks must be filled up by fresh subjects from other walks of life, to run perhaps the same round of deterioration. It would seem that startled nature, having given warning by the degenerated condition of three or four generations, at last refuses to continue a race so monstrous upon the earth. We see here another of those checks and balances which the exhaustless wisdom of God pre-established in the very nature of man, to prevent his utter degeneration."

Observation has demonstrated, that God has established a law forbidding the intermarriage of blood relations. So universally is this principle admitted, that men observe it with scrupulous care in the management of stock. The most ordinary farmer knows, when he permits this law to be violated, two or three successive years, his stock either die, or become degen-

Digitized by Google

erated and worthless. Cousins may have children, if both parties are healthy, which are comparatively sound; but they have within them the seeds of future infirmity of body and mind. But, while this may be true, it is an exception, for often are the children of healthy cousins affected with defective eyes, blindness, deafness, partial insanity, or they may be puny, scrofulous or dwarfish.

So far as investigation has been made, (Rept. to Gov. of Mass., 1850,) more than one-twentieth of all idiots are the result, or at least the offspring, of the marriage of relations.

In 359 cases of idiots, with only four exceptions, the parents, or their progenitors, had intermarried, or one or both parents had inherited unhealthy constitutions, manifested by scrofulous taint, defective organism, or great functional depravity. (Ibid.) Seventeen families were reported; the parents were blood relatives. The result is fearful. There were born unto them ninety-five children, of whom forty-four were idiotic, twelve were scrofulous and puny, one was deaf, one a dwarf. In one family of eight children, five were idiotic.

In 310 cases reported, twenty were attributable to consanguinity of parents; epilepsy in seventy-six; self-abuse in nineteen; vicious habits of parents in ninety-five out of 235 cases. Feeble condition of one or both parents in thirty-three cases out of 163 reported. Deficient mental capacity in one or both parents in sixty-five out of 185 cases reported. Two-thirds of all idiotic children are scrofulous, with spongy bones, flabby muscles, feeble bodies, and deficient brains. They are so, in most all cases, because their parents, or one of them, have transmitted the defect, and poisoned the blood of their descendants.

But, we will not pursue this part of our subject further. Consanguinity of parents; epilepsy; masturbation; habits of parents; intemperance; licentiousness; mental defects of parents; physical condition of parents; diseased ancestry; would each be a prolific subject, as a cause of dementia and idiocy. I will only refer to one subject more; one which greatly interests us as physicians, as philanthropists, as Christians; one of vital interest to the idiot; one of the greatest solicitude to unfortunate parents, who have imbecile and idiotic offspring.

Can they be educated? But a few years have passed since this question was considered settled; the idiot could not learn, could not be elevated, could not be redeemed. God had made him thus. "Why strive against God?" The idea of educating the idiot has been thought a visionary fabrication of a demented mind; and men who have engaged in this noble self-sacrificing labor have been scouted, and pronounced fit subjects for an insane asylum. A gentleman of distinguished philanthropy, remarked in reference to the education of idiots: "This is all wrong; the idea of teaching and training idiots is preposterous, because teaching involves the existence of mind, and it is the want of it that constitutes the idiot. Do not think it personal, but I must say I think none but fools would think of teaching fools." The above is not an isolated case of hasty judgment; wherever efforts have been

Digitized by Google

made to establish schools, there has been, to a greater or less extent, an array of prejudice and ignorance respecting the whole matter; and frequently, efforts in behalf of these unfortunate beings have been entirely subverted by willful opposition. For evidence to sustain the proposition that idiots can be educated, I am wholly dependent upon the testimony of others.

As physicians and as citizens of Indiana, this testimony is of the greatest interest. Should any effort hereafter be made to establish such a school in our State, physicians, as has been the case in other countries and other States, must and will be the prominent actors.

Dr. Howe says: "Most of these youth were, three years ago, in an utterly helpless and hopeless condition of idiocy. Some of them sat or lay in driveling impotency, unable to do anything but swallow the food that was given them. They were void of speech and understanding. They were filthy in their persons and habits, and given to debasing practices. They were unable to dress or undress themselves, or sit at a table and feed themselves.

"A great change has come over them. They have improved in health, strength, and activity of body. They are cleanly and decent in their habits. They dress themselves, and, for the most part, sit at table and feed them, selves. They are gentle, docile, and obedient. They have learned their letters, and some of them *who were as speechless as brutes can read easy sentences and short stories, and are gentle and affectionate.*" (Am. Jour. of Ins. 1851.)

Dr. Wilbur, of New York, School for Idiots, selected two idiots from the idiot house on Randall's Island, for the purpose of testing the practicability of their education. "Both had been idiots from birth, both partially paralyzed, and both entirely dumb, and could not understand more than a dozen words." So hopeless was their condition that the best friends of idiotic education dispaired of accomplishing any good for them.

The report continues:

"Both now exhibit as much intelligence as ordinary children of their age. Neither speak fluently, in consequence of some paralysis still existing, but both are improving rapidly in this respect. Both write on the blackboard." In grammar, geography, physical geography, they equalled ordinary scholars, and sustained excellent examinations. They are extremely amiable and affectionate in manners, and the intense activity of their newly developed minds render them very attractive.

Dr. Brown, of Barre, Mass., says: "After the health of the system is established, or partially so, the different members of the body are practiced and strengthened by various exercises, and each one is disciplined to do its part in supplying the mind with materials to stimulate its action. The awkward fingers are made pliant and useful; the restless, wandering eye is taught to look steadily; the blunted hearing quickened; and the vocal organs, hitherto useless are taught obedience to the will. The generally restless are taught immobility—the inactive activity." (Report, 1853.)

Dr. Richards, of Pennsylvania, says: "Of the sixteen admitted during the year, one was unable to step over the smallest object; two were unable to walk but a few steps at a time; nine preferred to use their hands in eating;

Digitized by Google

seven could not completely undress themselves; ten had no idea of cleanliness; four could use but two or three words; and six had never spoken.

"Results. Of the two who walked but little, one walks two or three miles, and the other a half mile, without fatigue. Those who formerly ate with their hands now prefer the spoon and fork. Four who only used a few words in talking, are now able to ask and answer questions. Of those who were dumb at the time of their entrance, three use words quite freely, while the remaining three are taking some initiatory steps to attain the same object. (Second Rep. of Penn. Training School.)

Dr. Parrish asks, (Fifth Annual Rep. Pen. School): "What is the prospect of their future usefulness?" He says: "Two of our children have been removed from our school, and are now attending school at home. Several of our girls are capable of housework, under proper supervision. Two of them wait on the table nicely, four sew sheets, towels, etc., fit for family use. Our boys work willingly and industriously in the garden, and several of them are able to go alone to church, select their proper seats, and participate in the services with becoming propriety. Our experience teaches that idiots may be redeemed from degraded helplessness, in which they are a tax upon community, to add their share of productive industry to the common stock, to become in good measure producers—self-sustainers. In short, from mere disordered machines, they grow to be men; feeble they may be, and poor, but yet were not idiots, but immortal men."

I extract the following from a letter to Dr. Howe, of Boston, written from Europe:

"I have seen, with gratification and astonishment, nearly one hundred fellow beings who, but a short time since, were shut out from all communion with mankind, who were objects of loathing and disgust, many of whom rejected every article of clothing—others of whom, unable to stand erect, crouched themselves in corners and gave signs of life only by piteous howls—others in whom the faculty of speech had never been developed, and many whose voracious and indiscriminate gluttony satisfied itself with whatever it could lay its hands upon. These unfortunate beings, the rejected of humanity, I have seen properly clad, standing erect, walking, speaking; eating in an ordinary manner at a common table; working quietly as carpenters and farmers; gaining by their own labor the means of existence; storing their awakened intelligence by reading one to another; exercising toward their teachers and among themselves the generous feelings of man's nature, and singing in unison songs of thanksgiving."

I have thus only glanced at this prolific subject; I have only mentioned a few of the many interesting features embraced in its consideration. My object in calling attention to it is, to refresh our minds and awaken some interest in so important a matter. It is a subject which should interest us as citizens of Indiana. Our benevolent institutions for the blind, the dumb, and insane, are creditable to the State; our institutions of learning are flourishing and well sustained; the opportunities of a good education are scattered broadcast over the State; poorhouses for the impoverished and outcast

Digitized by Google

are found in every county; a home has been provided for the sick and wounded; homes for the wandering, homeless orphan; houses of correction for the wayward; commerce is spreading wide its hands and making outlets for the productions of the land; arts and science and learning go hand in hand in every city, in every town; churches and christian influence are seen and felt, wherever we have a population; prosperity rules triumphant, until mirth, and joy and gladness dwell in every city, in every hamlet, save only where the imbecile and idiotic are found—for them the State has no provision. Gentlemen, shall it long be thus?

Digitized by Google

CHOLERA.

BY N. FIELD, M. D., JEFFERSONVILLE, IND.*

The committee, to whom was referred the subject of cholera, have had the same under consideration, and would respectfully report the result of their labors. They would remark that, so far as they can learn, no new light has been elicited on the etiology, pathology, or treatment of the disease. Several publications of recent date have been made of supposed discoveries of its cause and treatment, but they partake too much of speculation and conjecture to entitle them to confidence. The theories of writers thirty years ago are as rational and credible as any of recent date. While your committee would not discourage investigation, and the researches of the profession in this direction, but would stimulate every effort to arrive at correct views of this terrible disease, they nevertheless can not conceal their doubts with regard to ultimate success in discovering the cause of the pestilence, which seems to your committee to be involved in profound mystery and impenetrable darkness. Had cholera prevailed in the world, like other diseases, from the earliest ages of antiquity, and had it been governed by the same laws as other epidemics, there would be nothing extraordinary in its history or character. But it is a new disease, and one of the most fatal and destructive that has ever occurred on earth. It confounds and confutes all our reasoning in regard to its cause, or the laws that control it. It prevails in all seasons of the year with equal virulence from the torrid to the frigid zones. No locality, however elevated and healthy, is exempt from its invasions. Towns and cities, proverbial for their cleanliness, have often been more fatally scourged than those situated in more unhealthy localities. Indeed, the experience and observation of your committee have impressed their minds with the idea that districts of country and towns annually subject to intermittent fever are decidedly preferable, as places of safety, to high and healthy ones, far removed from malarious influences. But few cases of cholera ever appear in paludal

*Originally read before the Clarke County Medical Society.

Digitized by Google

districts. A marsh is a better place in time of cholera than a mountain! While the inhabitants of a country are shaking with the ague, cholera will pass them by. Your committee explain this fact upon the principle that where the bilious diathesis prevails, it is a protection against a disease of an opposite nature. No two diseases of a contagious or epidemic character can prevail in the system at one and the same time. One or the other will have the ascendency. In paludal districts ague and fever are to cholera what the vaccine virus is to small pox, a preventive or counter irritant. For the time being it takes precedence of all other diseases, and completely monopolizes the constitution. It is a remarkable fact that in all the visitations of the cholera to the Western States, that comparatively few cases ever occurred in the vicinity of ponds or marshes, while towns and cities in hilly counties and limestone formations suffered severely. In 1833 the town of Salem, Indiana, with a population less than that of Jeffersonville, lost nearly one hundred, while the latter did not lose twenty! Charlestown, also, lost more in 1833 than Jeffersonville lost in the three years of its first visit. Lexington and Versailles, Kentucky, noted for their uniform good health, were almost depopulated. With a joint population of less than ten thousand, they lost more than Louisville and its suburban towns, with a population of eighty thousand! These significant facts are worthy of consideration, as they may lead us to the knowledge of some prophylactic treatment or atmospheric influence as a protection against this fatal disease. For it respects neither age, nor sex, nor condition. It invades alike the palace and the hovel. Wealth, with all the comforts and luxuries of life, is no barrier against it. It makes its periodical tour around the globe in defiance of quarantines and sanitary laws, sweeping, as with the besom of destruction, millions of human beings to the grave. Like a destroying angel it goes forth on its mission of death, does its work, and quietly returns to its birth place to rest for a season, until a new harvest of victims is ready for the slaughter.

Cholera is of Asiatic origin. It first appeared at Jessore, a city of the delta of the Ganges, about the beginning of 1818. From this point it spread rapidly in all directions. It reached Bombay in August of the same year. From this place it traveled in an easterly direction, ravaging the Burman Empire and the peninsula of Malacca. In 1819, it ravaged the island of Sumatra, Ceylon and the isles of France and Bourbon; also Singapore and Siam. In 1820, it reached Tonquin, Southern China and the Phillipine Islands. In 1821, Java, Borneo, and numerous other places in the Indian Archipelago. In 1822-3-4, it appeared in Pekin, Central and Northern China. Its prevalence and fatality in these countries were without a precidence in Medical records. In 1823, it appeared at Astracan, beyond which it seems not to have traveled in a westwardiy direction until 1828 and 1829 it spread northward, and westward through Russia, Poland and Austria. It appeared in England on the 26th of October, 1831, and in the United States in 1832. From 1831 to 1837, it visited every country in the world, destroying millions of human beings in its destructive march. In some oriental cities nearly half of the inhabitants perished.

Digitized by Google

With this historical sketch of the rise and progress of this fearful pestilence, your committee fondly hope that it may soon pass away from the world, or, like the plague of Egypt, confine itself to the banks of its native Ganges. While your committee make the humiliating confession that they know nothing of the cause of cholera, still they are pleased to say that there is not the same obscurity in its pathology. Whatever may be the influence upon the animal economy superinducing the disease, it is very clear that it is a serous hemorrhage. It is the water of the blood escaping through the capilliaries of the alimentary canal. The cause, whatever it is, enervates the vascular system, relaxes the exhalents of the intestines, and allows a regurgitation of the chile and serum upon these exposed and delicate vessels; they give way under the pressure and retrogade movement of the vital fluids, and the patient speedily succumbs unless the hemorrhage is arrested. The loss of the water of the blood, if permitted to go on, will destroy life with as much certainty as a wound of a large artery or a persistant epistaxis.

The first indication of danger is a diarrhœa similating rice water or soap suds, which is a compound of serum and chyle. The discharges are generally without pain or uneasiness, and frequently slight in the beginning of the attack. From this circumstance the patient is apt to infer that the diarrhœa is the result of some error in diet or a salutary discharge. The absence of any serious constitutional disturbance throws him off his guard, as is too often the case, until the fatal collapse ensues. He virtually allows himself to bleed to death before he apprehends danger or calls for medical aid.

The diarrhœa as described, is the incipient stage of the disease, called the premonitory stage. It is the curable stage. It is the auspicious moment when the disease can be arrested and the danger averted. No time should be lost in stopping this diarrhœa. It should be done as promptly as we would ligate an artery, or use styptics and compression in alarming uterine hæmorrhage. Every moment of delay is like allowing a spark of fire to be kindled to a destructive conflagration. A phosphorus match, if ignited and applied to combustible materials, will burn up the largest city in the world, if no effort is made to extinguish it. In the commencement a pint of water will do the work, but if let alone a few hours all is lost. One dose of medicine in the forming stage of cholera is worth a thousand in the stage of collapse.

The treatment of cholera consists mainly in astringents and such other means as are ordinarily adopted to restrain passive hemorrhages. On the very first appearance of the diarrhœa, no matter how light and unimportant it may seem, the patient should be advised to take his bed and keep in a recumbent position. The erect posture favors a hemorrhage by breaking the balance in the circulation, and favoring local congestions. This rule should be imperative and rigidly enforced. The patient should be told that his life is in jeopardy, and trivial as the diarrhœa may appear, it is the harbinger of the more dreadful and fatal form of the disease. In addition to this, a half a grain of opium with three grains of acetate of lead, or five grains of tannic acid, should be administered every hour until the discharges entirely cease

Digitized by Google

and the bowels become costive, after which they should be moved with a cathartic specially adapted to the augmentation and excretion of bile; for as soon as bile is copiously thrown into the alimentary canal, the danger is over. There is no better compound for this purpose than pills composed of equal parts of calomel, rhubarb, and aloes. One of these pills of five grains should be administered every three hours until the bowels move naturally. In all probability the first discharge will be tinged with bile instead of the white rice water color, which is a favorable indication. When the discharges become dark, consistent, and more or less mixed with bile, the treatment may be suspended.

In the meantime, the patient should be advised to rest for a few days, and avoid all indigestible diet, or anything calcutated to disturb the healthy functions of the chylopoetic viscera.

But as it is often the case that the physician is not consulted or sent for until the disease has assumed its most dangerous form, a somewhat different mode of treatment may be required. If the patient is on the verge of exhaustion, and complains of nausea, the administration of an emetic of mustard and salt, a teaspoonful of each in a tumbler of warm water, will be the most suitable remedy with which to begin the treatment. It will act promptly and greatly improve the sensations of the patient's stomach. It powerfully stimulates the absorbents and reverses their action. As soon as the first dose is ejected, a second one should be administered, which is not unfrequently retained. If so it passes into the duodenum and through the whole course of the intestines, stimulating in its passage the enervated capillaries, and causing them to take up fluids rather than exhale them. After the administration of the second dose, about one-half the quantity should then be mixed with a half tumbler of warm water, of which a tablespoonful should be given, with 20 drops of tinc. opii, every half hour until the purging is entirely arrested. This mode of treatment is decidedly the best, and if persevered in will, in a large majority of cases, prevent the fatal collapse when, to all appearance, it would seem to be inevitable.

If, however, we are not called until the collapse has ensued, with cramps, coldness, and blueness of the surface, shriveled skin, feeble voice, and ghastly expression of countenance, instead of administering opium and other powerful astringents and sinipisms and blisters, hot bricks and bottles of warm water to the extremities, we should at once apply the actual cautery to the muscular part of the fore arm and ankles, and follow it up with dry friction over the whole surface, until reaction is produced. The best internal remedy is the strongest tinc. of camphor, in doses of from 10 to 20 drops every half hour, according to the age of the patient. If under this treatment the pulse returns, with warmth of the whole surface, fever of a low type supervenes, which must be combatted with remedies appropriate to the symptoms. As a general thing, it assumes the character of typhoid fever, and should be treated accordingly.

This general outline of the treatment of cholera, in its different stages, is

Digitized by Google

submitted as the result of their own experience and observation, in the hope that it may not be without some value to the profession.

Dr. J. F. Hibberd:

In reference to the doctrine contained in the essay just read, that when intermittent and malarial fevers prevail, cholera is not likely to obtain, I must seriously object. Last year, in Richmond, we had these fevers extensively, and cholera to a very great extent. In over half the cases that proved fatal during the prevalence of the epidemic, diarrhœa preceded the attack. From the first of August to the last of October there were very few, if any, who had not suffered from diarrhœal symptoms that might have developed into cholera.

I think that as far as the experience of Richmond is concerned, the gentleman's theory will not do. The analogy based upon the educating of the system to the use of tobacco and opium is not legitimate. It is true that the system that would be destroyed by the taking of a certain amount of opium at a single dose, may be so educated to the use of it as to be enabled to take double that amount without injury. The tobacco that nauseates and unnerves, may by use become pleasant and inspiring, but I think the principle that holds good in reference to these articles will not apply in that of cholera. The system can hardly be so educated to the refusing of the poison that engenders cholera as to become invulnerable to its attack. In fact I have never heard that cholera was obliging enough to offer itself in doses so graduated as to educate the system to its more violent visits.

Dr. John Moffit:

I have a few facts to relate in reference to the propagation of this disease which may prove valuable. It is only by experience, at any rate, that we become sufficiently acquainted with the nature and cause of the epidemic to oppose its spread with any degree of success. During the epidemic in 1849, I was connected with the Commercial Hospital in Cincinnati. In December of that year, several of the marines who had come from New Orleans where the epidemic had prevailed, were brought to the hospital suffering from cholera. One singular fact connected with the spread of the disease was that it confined itself to one ward at a time. In one ward two persons were attacked within twenty minutes of each other. One died within six hours, and the other within four hours. It next dropped through the floor. Next it attacked the female lunatics, who had no connection at all with the wards containing diarrhœa patients, and thus continued, selecting its victims, apparently, as it traveled and visiting only one ward at a time.

In reference to the meteorological phases of cholera. During its prevalence in Cincinnati, it confined itself mainly to the districts skirting the base of the hills, known generally as the Brighton district. It was noticed that immediately after a rain the number of cases were increased. My observation has been, that those persons who are most liable to the attack of cholera are those who are laboring under diarrhœal affections. Without entering into detail in regard to the processes that rob the patient of vitality, I shall only

Digitized by Google

mention it as my belief that the oxygen is exhausted and the man dies for want of blood. In support of this fact, I wish to relate an incident. Dr. Edwards, a government surgeon, visited the hospital and found among the patients a man weighing over two hundred pounds who seemed more dead than alive. The Doctor told us to bleed him, and if blood flowed the man would get well. If not, he would die. We did so, obtained a rather copious flow of blood, and the man, contrary to our expectation, did recover. The letting of blood showed that the blood was still circulating, and that there was enough vitality remaining to withstand the ravages of the disease. I understand that a relating of what we have seen in the operations of diseases is one of the objects of the Society. I feel that I never come here and listen to this interchange of ideas without going back to my work with greater confidence in myself.

Dr. J. J. Wright:

I have a word to offer in regard to the great change that seems to have been worked in some way in regard to what has been called the lower or malarious districts. I have myself lived in the highlands and in the valleys, and my observation has been that the lower districts are losing their miasmatic influences, and are now even more healthy than the higher districts. The typhoid fever, which in Morgan county was once generally fatal in the lowlands, is now of a milder character, and on the highlands the same fever has grown far more difficult to treat than ever before. Now I venture the assertion that Indianapolis is healthier than Richmond, although the latter place is higher. It is a question of considerable importance why the limestone or upland districts are now grown more unhealthy than the lower or generally denominated malarious districts.

Digitized by Google

Digitized by Google

PRIZE ESSAY.

THE CAUSES, NATURE AND TREATMENT

OF

CEREBRO-SPINAL MENINGITIS

Valeat quantum valere potest.

BY JAMES R. WEIST, M. D.,

RICHMOND, INDIANA.

Digitized by Google

"The questions of evidence to be settled, the fixing of connections and differences, the separation of what is subordinate or incidental from the primary and fixed characters of disease, and the reconcilement of anomalies, might approve themselves as an exercise of the understanding, even were there less assurance of value in the results."—HOLLAND, *Medical Notes and Reflections.*

Digitized by Google

CEREBRO-SPINAL MENINGITIS.

HISTORY.

Before proceeding to the consideration of the "Causes, Nature, and Treatment of Cerebro-Spinal Meningitis," I propose to sketch very briefly the history of this disease. While any historical notice of this kind does not, perhaps, properly fall within the scope of the question as presented, except so far as it may throw light upon the questions involved in an investigation of the causes, nature, and treatment of the disease, such notice can not be considered as entirely foreign to it.

While some medical writers have attempted to trace the existence of epidemic cerebro-spinal meningitis back to the fourteenth century, and to identify as this disease various epidemics of "typhus," of "fever," and of "spotted fever," that have been recorded in medical history since that time, and while there exists but little doubt that some of these epidemics were outbreaks of the disease under consideration, it is impossible to separate this disease from others with which it has been confounded during even the present century. It would, therefore, be clearly a waste of time and labor to speculate as to the precise nature of any given epidemic occurring during this period, while the fact is so evident to all, that no conclusion arrived at could be received as certainly true, because of the uncertain premises from whence deduced.

The confusion and uncertainty existing in relation to the precise nature of many of the outbreaks of disease in the past, excites but little surprise when it is remembered that pathological anatomy scarcely existed as a branch of medical science before the beginning of the present century, and if "to study death is to be initiated into the mysteries of life," it is equally true that to trace the footprints of disease as revealed by the scalpel and the microscope, in the dead body, is to learn the essential nature of morbid actions, and to distinguish one disease from another. While post mortem examinations are not always necessary for the diagnosis and classification of disease, it often happens that they only can give the testimony required for the purpose, there-

Digitized by Google

fore before such examinations were repeatedly and carefully made, nothing better could be expected than confusion and contradictions in the description of many diseases, and especially of those presenting many features in common, the distinguishing lesions of which are only discoverable after death. This is particularly true of the various epidemic diseases occurring during and preceding the last century, for this reason I will restrict my sketch of the history of cerebro spinal meningitis to a notice of its outbreaks in an epidemic form since the beginning of the present century.*

In the year 1805, epidemic cerebro-spinal meningitis appeared in Geneva, Switzerland, and raged with great violence. It was at once recognized as being a disease that had never before been seen in that country. Its victims were, without warning, struck down with extreme prostration, which was, in a few hours, followed by death. Vieusseux, who described this epidemic, considered it to be "a non-contagious malignant fever." Post mortem examinations revealed the inflammatory lesions of the brain and spinal cord that are now admitted to be characteristic of the disease. In 1806 the same disease prevailed in the Prussian army, and during the same year made its appearance in this country at Medfield, Massachusetts. In 1807 it appeared in Litchfield county, in Connecticut, and continued in this State during 1808-9. In 1807 it was seen in Briancon, in France. During the winter of 1809-10, the disease prevailed in various towns in Massachusetts, and was also met with in the States of New York, New Hampshire, and Vermont. Continuing in New England, it extended into Canada, Pennsylvania, Virginia, Ohio, Kentucky, and the southern portions of the United States. In 1811 it was at Dantzic, in Prussia. In 1813-14 in various parts of Fance. In 1815 at Mentz, Gemany, and in Bavaria in 1816.

During the succeeding years the disease seems to have almost entirely disappeared as an epidemic. In 1822, however, it appeared for a short time at Vesoul, in France, and at Moans in 1823, and in the same year also at Middletown, Connecticut. In 1828 it was met with in Trumbull county, Ohio; at Sunderland, England, in 1830, and at Naples in 1833.

Again the disease disappeared as an epidemic to reappear after four years, and begin a new march more extended and destructive than before. For the first two years after this fresh outbreak in Europe, it was mainly confined to France. Commencing in the southern portion of this country, it made its way north by two distinct routes along the eastern and western borders.

---

* Dr. Gallup says of spotted fever (Sketches of Epidemic Diseases in the State of Vermont: Boston, 181[illegible], page 223.) "In A. D. 1505, it is represented as overspreading Europe. In 1528 it again invaded Europe, followed by the plague; and again in England and France in 1556; and in Spain in 1557, as mortal as the plague. Spotted fever was in many places in 1564. From 1569 to 1574 the spotted or petechial fever prevailed in Europe with much mortality, and was followed by the plague. Spotted fever at Trent in 1591, and in 1592 at Florence. In Europe in 1624. In Italy in 1691 and 1693. In England in 1698. In Prussia in 1704. In England in 1710 and 1714. In Piedmont in 1720. In Egypt in 1760."

M. Broussais says that this disease has prevailed epidemically in different countries in Europe, chiefly in the years 1503, 1510, 1517, 1545, 1553, 1559, 1571, 1580, 1582, 1616, 1661, 1757, 178 , 1805.

While there is reason to suppose that some of these epidemics were true cerebro-spinal meningitis, for the reasons given in the text, it is impossible to determine which of them were such. Some of them were doubtless epidemics of typhus or other adynamic fevers.

Digitized by Google

The epidemic continued to prevail in France until 1849. In 1840 it was in Algeria and in Italy. In 1742 the disease made its appearance in this country in Kentucky, Tennessee, and Alabama, at points widely distant from each other. In 1844 it prevailed in southern Illinois, and visited Gibralter during the same year, and in 1845 it prevailed at the same time in various parts of Ireland, England and Scotland, as well as in Algiers and Denmark. In the latter country it continued to commit fearful ravages until 1848. In 1846 it was again in France, at Toulon. In 1847 in Mississippi and Arkansas. In 1848 it appeared at the same time in Alabama and Pennsylvania. In 1849 in Massachusetts and New York, and among the French soldiers in Italy. In 1850 it was in New Orleans. At about this period the disease seemed to die out in both Europe and America, and nothing more is heard of its ravages for another period of four years.

We next hear of the disease in 1854, in a country that had previously escaped its desolating influences—Sweden. Here it continued to prevail until 1860. In 1856 it was at Salisbury, in North Carolina. In 1857 it occurred in a severe form in Onondago and Chemung counties, New York. At about the same time a few cases were met with in Dublin and in various parts of England. It still continued to prevail in Sweden. In 1861 it was in Portugal, as well as in Norway and Holland. In the winter of 1861–'62 it appeared in Missouri, and in the early part of 1862 in Kentucky, Indiana and Connecticut, and in the fall of the same year among the negroes at Memphis, Tennessee. During 1861 and up to 1864 it prevailed in Ohio. In the winter of 1862–'63 it broke out at Newbern, North Carolina, among the United States soldiers. In the early part of 1863 it prevailed with great fatality at Newport, Rhode Island. During the same year it appeared in Philadelphia. In Germany, it made its appearance during the summer of the same year. Increasing during the winter, it continued to prevail with fearful violence throughout the northern portion of this country during 1864 and 1865, and to a slight extent in Austria. In 1863 and 1864 it visited Illinois and several of the north-western States, Alabama, North Carolina, Maryland and Virginia. During the latter year it also made its appearance in Washington, D. C., New York city, Vermont, Massachusetts, New Jersey, Pennsylvania, and among the soldiers at Chattanooga, Tennessee, Danville, Kentucky, and elsewhere.

Since this period until the present time the disease has lingered in various parts of Europe and this country, annually making its appearance in various localities, yet without assuming the epidemic form or the fearful malignity belonging to it in former times.*

---

* It was my intention to present something of a detailed history of the various epidemics of cerebro-spinal meningitis that have prevailed in Indiana, but it has been impossible to collect the necessary materials in time to allow of their being used for this purpose in the present essay.

Beginning with the present decade, the disease appeared at Castleton, Marion county, in the spring of 1862. In December of the same year it prevailed in the counties of Harrison, Dubois, Spencer and Perry, and during the winter in Lagrange county, and elsewhere in the northern portions of the State. In the eastern part of the State it was met with in Wayne county and in Rush in the spring of 1863. Indeed, during the winters of 1862–3 and

Digitized by Google

It will be seen from this brief sketch of cerebro-spinal meningitis that it has appeared almost simultaneously in various parts of Europe and America, and often at points widely distant from each other, unconnected by great routes of travel, and presenting the greatest dissimilarity as regards climate, soil and water, as well as the social condition, customs, occupations and habits of the population. Almost the only circumstance common to these various outbreaks is that they have occurred in winter, and even this has not been universal.

No other epidemic disease with which we are acquainted, with the exception, perhaps, of influenza, presents such a history as this. They all, except this, give some warning of their approach, and in their rise and decline exhibit some evidence of law and order, having a tendency to spread by intercourse with those exposed to the same causes of disease, and thus predisposed to it, and extending along the great routes of commerce and travel—this comes unheralded, prevailing without any apparent connection with its existence elsewhere, and as mysteriously disappears. Unquestionably its appearance and progress is regulated by immutable laws. We only fail to recognise them because of the imperfection of our knowledge.

CAUSES.

Whenever an attempt is made to discover the causes that operate for the production of epidemic diseases, we find that the paths by which we must proceed are obscure, and lead into such mazes of speculation and doubt that we almost despair of ever gaining the object sought. It is much to be regretted that so many difficulties stand in the way of obtaining positive knowledge in relation to the etiology of these diseases, and that so many elements must be considered when we attempt to solve the intricate problems they present, for if we knew the causes producing such fearful results, and were familiar with the many circumstances modifying their action, we would be not only placed in a position that would enable us to render more efficient aid to our fellows when suffering from these maladies than we can now do, but possibly by discovering the foreshadowings of evil we might prevent them altogether.

This subject of the etiology of epidemic diseases is a comprehensive one, for many agents, mental, moral, physical, ponderable and imponderable, by which mankind are surrounded, are continually exerting—alone or in combination—influences capable of producing disease, mental and moral influences, the social condition, the supply of food, the vicissitudes of heat and cold, the different seasons, the prevalence of particular winds, the state of the atmosphere as regards its electrical, barometrical, thermometrical, hygrometrical

---

1863-4 it was probably observed in most of the counties of the State. Since 1864 it has annually been met with in various parts of the State, without, however, assuming an epidemic form.

Since its advent in 1862 the cause or causes of the disease seem to have been in constant operation, in some cases producing the disease in an unmistakeable form but in very many more modifying and influencing other diseases, causing them to present features not properly their own.

Digitized by Google

and organic condition, the nature of the geological formation, and the supply and quality of water, are all factors that must be considered before the questions presented can be determined. Patient and long continued observations, aided by all the resources of modern science, will be required before facts can be made to supplant hypothesis and theory.

The abstruseness of the subject by no means comprises the whole of the difficulty in the way of ascertaining the truth. Medical observers, biased by prejudice or wedded to particular opinions, are often unable to see phenomena that do not square with their own theories, and in this condition they form conclusions from imperfect data, and proclaim their opinions and assumptions as facts. Hence our literature is filled with the wildest and most contradictory theories that it is possible to conceive of, respecting the various epidemic diseases, and from which it is almost impossible to isolate the truth. In other instances, where an attempt has been made to report observations simply without regard to their bearing on any theory, the record is imperfect, some of the circumstances are not noted, without which it is impossible to form a just idea of the causes that operate for the production of morbid actions in the human body.

In relation to the causes originating and modifying some of the epidemic diseases, as well as to their mode of propagation and extension, much has been learned, and among the conflicting theories respecting them held by the medical world the unprejudiced observer can pretty certainly indicate the direction in which truth lies. As to others, however, scarcely any certain knowledge has been obtained in relation to these points, and hardly a single ray of light has penetrated the thick darkness that veils their mode of origin. Into the latter category falls cerebro-spinal meningitis.

In the present state of our knowledge I can do but little more in treating of this branch of my subject than to relate some of the circumstances attending the outbreaks of the disease.

We have seen while sketching the history of cerebro-spinal meningitis that it has appeared successively or at different times in almost every part of Europe and America, and among the most different classes of people. The next step in our order of inquiry is to determine if any particular season seems to favor the origin and propagation of the disease. An examination of the history of its various outbreaks shows that they have most commonly occurred during the cold months, or between October and April. In the United States this has been almost universally the case. An epidemic, however, prevailed at Middletown, Connecticut, in 1823, between the last of March and the last of December, and again during the summer of 1825. In Europe, the occurrence of epidemics has not taken place as uniformly during the cold season as in this country. It is stated by Stille that "in Germany the rule has been nearly the same as in the United States; but in France, out of 216 local epidemics, 166 occurred between December 1 and May 30, while in the other six months of the year there were 50. So in Sweden, out of 417 local epidemics 311 took place in the former period and 106 in the latter." During the prevalence of the epidemic influence it is not uncommon

Digitized by Google

for cases of the disease to be met with during every month in the year. This, for instance, was the case in Philadelphia in 1864 and 1865. In each of these years the greatest mortality in any one month occurred in March, and the lowest in September, yet more or less cases were reported during every month in these two years. While it is evident that cold favors the development of the disease, it is demonstrable from the above facts that it is not absolutely essential for it.

No facts are recorded that tend to establish any connection between the occurrence of this epidemic and a disturbance of the electrical or barometrical states of the atmosphere. It is true, however, that a sufficient number of carefully conducted observations have not been made in order to determine whether or not such disturbances have existed during the prevalence of the disease, and if so whether they can reasonably be supposed to have exerted an influence in the causation of the disease.

We come next to inquire if there has been anything peculiar to the localities where the disease has prevailed, and we find that nothing has been discovered that leads to such a conclusion. It has prevailed alike in city and country, in regions of great elevation, as well as in those near the level of the sea, over every variety of geological formation, in localities damp and dry, where miasmata exist and where they are absent, among crowded populations reeking in filth, and in the sparsely settled country district, seeming, unlike cholera and typhus, to have no favorite haunts.

Its victims are selected from both sexes, of all ages, habits and occupations. While it has sometimes first made its appearance among the poor, in others it has been the opposite class who were first attacked. Contrary to what might have been expected, it is not among the weak and feeble that it seems to prefer to select its victims, but from among the young, the strong and vigorous. In the epidemic at Philippeville, in Algeria, it was among the Maltese porters that the disease first broke out. In the epidemic at Avignon, in 1840, Chauffard says: "It selected for its attacks only men of from twenty to thirty years old, fresh and vigorous young men, wholly exempt from morbid proclivity, and who died, almost all of them, in full flesh." Dr. Upham, in describing the epidemic at Newbern, North Carolina, in 1862-3, reports that his cases occurred among the most robust of the young soldiers, and this peculiarity of the disease in attacking most commonly the young and strong has been noticed by various observers in almost every epidemic.

Sex seems to have some influence in predisposing to an attack of the disease, a greater proportion of males being seized with it than females. Thus Stille states that "in Massachusetts, where the female population is greatly in excess, there was a preponderance of nearly sixty per cent. of male over female patients." In France the same disparity has been observed between the number of males and females seized with the disease. In Sweden, however, and in certain towns in Germany, the number of deaths among females equaled and in some instances exceeded those among males. It may, however be stated as a general rule, notwithstanding these exceptions, that a majority of those who suffer from the disease are young vigorous males.

Digitized by Google

Having made this hasty sketch of some of the circumstances attending the outbreaks of this disease, we discover that an examination of the seasons, weather and localities where it has prevailed, and of the condition of its subjects, furnishes us with no information in relation to its cause. Where shall we further seek for it? Is it some subtle and special poison which through the agency of the atmosphere is extended over entire continents, exerting here and there its baneful influences, governed in its selection by local causes, and by laws not yet discovered, or is it of local origin, having its birth in each instance in the locality where the epidemic prevails, or will the facts warrant the conclusion that it is unnecessary to invoke the aid of an undemonstrable agent, in order to account for the origin and prevalence of the disease? These are questions of great interest, but unfortunately questions that cannot be answered in the present state of our knowledge, therefore it is useless to enter into any lengthy speculation upon them.

While in all probability the disease is caused by a specific material agent, the most elaborate chemical analysis, and the most careful microscopic examination has never detected it. Whatever may be its nature, whether organic or inorganic, it is probable that it is always in existence, but that it is insufficient to produce the disease except where circumstances are favorable for its operation. This idea is supported by analogy. The army worm, the cotton worm, the grasshopper and locust, only increase, flourish and commit their depredations during certain years, yet they as well as their food exist each year, therefore there must be only certain times and seasons when the conditions necessary to their increase exist. What these are we are almost as ignorant of as we are of the conditions necessary in order that a specific cause may produce the disease in question. We also know that many of the lower forms of animal and vegetable life can only be discovered under certain conditions. With reference to some of these we know the conditions under which they are generated, and it may be said that we can produce them at will, yet unless the theory of spontaneous generation be adopted we must believe that the atmosphere contains at all times minute cells, sporules or particles of matter so small that they cannot be recognized even with the most powerful glass, yet possessing an inherent specific principle of life, else whence comes the vibrioues and monads that are always produced during the decay of certain animal and vegetable substances? I believe, therefore, that it is more reasonable to conclude that the specific cause of cerebro-spinal meningitis is always present, ready to be called into activity whenever the conditions are favorable, than to suppose it to have its genesis only at uncertain intervals. Forced, as I believe we are, to conclude that there must exist a material agent for the production of this disease, it, as I have before stated, has never been demonstrated. The theory that epidemic diseases owe their existence to the presence in the atmosphere of minute animalcules or cryptogams has attracted much attention, and I incline to the belief that medical men are becoming each year more disposed to adopt this theory, although if peculiar forms of animal or vegetable life are present in the air during the existence of certain epidemics they have not been dis-

Digitized by Google

covered. Yet this is no proof that they do not exist, for there is no reason to conclude that the microscope has yet revealed the smallest forms of life. Professor Rymer Jones says, "Exhaust the art of the optician, strain your eyes to the utmost, until the aching sense refuses to perceive the little quivering movement that indicates the presence of life, and you will find that you have not exhausted Nature in the descending scale." All this is mere speculation, yet if in the absence of facts we reason at all we can do no better than theorize. I may say, however, that nearly all of the arguments that have been adduced in support of the theory that cholera and certain other epidemic diseases, owe their existence to low forms of animal or vegetable life, apply as well, if we suppose that the disease of which we are treating has a similar origin; not all, for there is one fact that militates against the theory, the only agency with which we are acquainted that seems to favor the development of cerebro-spinal meningitis is cold, although as we have seen this is not essential to it, and this is not favorable to the production and increase of any of the known lower species of animal or vegetable life.

Unlike some of the other epidemic diseases, cholera and typhus for instance, this does not seem to prefer for its ravages places crowded with a poor, filthy and vicious population. It is true that attempts have been made to show that in such localities it has raged with a peculiar virulence, but the instances where it has done so are only illustrations of the familiar fact that all epidemic diseases occasion a greater mortality among the poor, the ill fed and ill clad denizens of such localities than among the opposite class, living in comfort and surrounded by better sanitary influences. The facts that have been brought forward to show that poverty and filth are predisposing causes of the disease demonstrate nothing. If it were true that the disease, in the beginning of an epidemic, usually made its first appearance in localities where these conditions must abound or manifested any disposition to limit itself to them, they would have some weight. Perhaps in no cities of the world does there exist more squalor and miserable poverty than is found in London and New York, yet in these cities the disease has never become epidemic. In both of those cities every condition seems to be present favorable for the reception and multiplication of the morbid germs of the disease, if an overcrowded population, poverty, or filth are such. Besides, the disease often makes its appearance in villages and in thinly populated country districts, attacking the young and vigorous, who are surrounded by all the conditions known to be conducive to good health. It will be sufficient, then, to state that we know of no combination of circumstances that are sufficient to originate epidemic cerebro-spinal meningitis, independently of an unknown specific cause, and of none that will prevent its origin and increase when this is present.

Without pushing this part of our inquiry further, we may very properly ask if this disease is contagious. The great majority of the observers who have described it unite in the statement that it is not so. North, who was one of the first to describe the disease in this country, says that "it is not a contagious disease," and that such is the opinion of "all those physicians who

Digitized by Google

have witnessed its ravages." The committee appointed by the Massachusetts Medical Society came to the conclusion that it was not contagious at all, and this has been the testimony of nearly all of the writers who have described the disease, as it manifested itself in this country during the later epidemics. Drs. Burr and Ottman, who saw the disease at Carbondale, Pennsylvania, in 1864, are emphatic in their statements in regard to its noncontagiousness, and their opinions are particularly valuable from the fact that in the locality mentioned the disease raged with an almost unprecedented fatality, and under conditions where, if contagion had existed, it would have manifested itself. Stille, who observed the disease in the Philadelphia Hospital in 1866-7, says, "no evidence whatever of contagion was afforded."

In Europe the same conclusion has been pretty generally arrived at. Vieuseux, in 1805, proposed to call the disease "malignant non-contagious cerebral fever." Tourdes, in speaking of the epidemic at Strasburg in 1840-1, says, "a study of the facts resulted adversely to the idea of its spread by contagion," and similar conclusions were arrived at by the physicians who observed the disease at Leipsic and Berlin. On the other hand, M. Boudin contends that the disease is contagious. He claims that when it manifested itself at Geneva in 1805 evidences of its contagious nature were presented, but we have already seen that Vieusseux, who had every opportunity of determining the question, does not believe in its contagious nature—he says that the disease appears to depend "upon peculiar atmospheric conditions, and not for a contagion communicated from man to man."

In 1846 and 1847 the disease showed itself in the garrison at Lyons, and was confined to Fort Lamotte. Other regiments, much less favored in point of accommodation, and the civil population escaped." "The epidemic prevailed at Mentz in 1847-8 and 9. The second artillery regiment, which came from Bourges, where the disease existed, lost a man on the route, and was the first attacked after its arrival at Mentz. It showed itself soon in another regiment occupying the same barracks. In the hospital three nurses and one of the chief surgeons fell victims to the disease. Those confined to the prisons—nearly four hundred—escaped. The civil population furnished only a very few cases, but these few occurred in the vicinity of the infected barracks." M. Boudin gives many other instances to show that the disease was carried from one point to another, but they all fail to prove that contagion is an element in the causation of the disease.

In the spring of 1865, when the United States forces took possession of Wilmington, North Carolina, a disease was found prevailing among the Union prisoners left behind by the rebels, which was variously reported as "typhus," "typhoid," and "spotted" fever, but which I conclude from my observation of it was unquestionably cerebro-spinal meningitis. Soon after the occupation of the city, several thousand United States prisoners were exchanged and brought in, the disease spread among them with great fatality, many of the nurses, and at least four of the medical officers who were in attendance upon the cases, died of the disease. Very few cases occurred among the civil population or among the troops encamped outside of the

Digitized by Google

city. Sometime afterward, however, the disease prevailed extensively among the negroes who flocked into the town from the surrounding country. The fact that in this instance the disease was communicated to prisoners coming within the sphere of its influence, and to the nurses and medical attendants, would seem to favor the idea of contagion, but this instance, as well as those related by Boudin, are so contrary to almost universal experience they can hardly excite a suspicion of the contagious character of the disease, and we may conclude that all the examples that have been adduced in support of this theory are entirely inadequate to establish it. It is a matter of some surprise that the professsion have been so unanimous in the belief that the disease is never communicated by contagion, in view of the fact that scarcely any question has ever been raised in relation to an epidemic disease that has not elicited the most lively controversy.

Does there exist any connection between epidemic cerebro-spinal meningitis and other epidemic diseases? This is a question of great interest, and one worthy of examination in this connection, even if it fails to throw any light upon the cause of the disease under consideration. A glance at the history of epidemic diseases will always arouse a suspicion of a relationship exhisting between them, and that perhaps even those now regarded as being very dissimilar may be the result of a common cause, and that their observed differences may be dependent upon various modifying influences. The different seasons, heat, moisture, electricity, weight of the atmosphere, locality, social condition, the influence of foregoing disease, and the quantity of the virus itself, may all be supposed to cause such modification. Future investigation will probably throw much light upon this subject. Medical philosophers will in all probability, in future years, determine as certainly the correlation existing between different diseases as the physicist now does between the physical forces; but in the present state of medical science we can have only faint conceptions of the nature of this relation, and catch uncertain glimpses of the truth.

Among the epidemic diseases none seems to have so intimate a relation with cerebro-spinal meningitis as influenza. This latter is a disease that, like the former, has appeared and spread in summer as well as in winter, extending itself over entire continents under every variety of atmospheric state, affecting large numbers of people in one locality, while those in the immediate neighborhood escape, prevailing for uncertain periods, and assuming every grade of severity; numbering among its victims both the rich and the poor, showing itself to be like the other, a true pandemic disease. There are still other points of resemblance between these two diseases. In many epidemics of influenza the symptoms and course of the disease have so clearly resembled those of cerebro-spinal meningitis as to lead to the mistake of supposing them identical. Thus Dr. Job Wilson, who was one of the earliest American writers upon this disease, states, "the similarity of influenza to spotted fever is so striking, that had it not been for the accidental appearance of spots in some cases, the probability is that the present epidemic would still have continued to be called by that name." He believes them to correspond in all the most important particulars, and says that he "can discover no

Digitized by Google

utility in considering and treating the spotted fever and influenza as distinct diseases." While I by no means hold that the diseases are the same, I do believe that there is a relationship existing between them, and base the opinion on facts that to my own mind seem amply sufficient to support it.

If an examination be made of the history of epidemic meningitis with reference to this question, it will be found that influenza has in the majority of instances prevailed, either a short time previous to its outbreak, concurrently with it, or very soon afterwards. Thus in 1803, to go no further back, a wide spread epidemic of influenza prevailed in Europe, which seemed to give place to the epidemic of cerebro-spinal meningitis of 1805. In 1807, both diseases prevailed in this country. In 1830, epidemic meningitis existed in certain parts of Europe, while in 1831 influenza prevailed in both Europe and America, and during the succeeding year both diseases were met with in Europe. In 1837, a fatal epidemic of influenza prevailed in Europe. At the same time epidemic meningitis extended over France. Dr. Graves reports that in this year 4,000 persons died in Dublin alone of influenza. Dr. Holland reports that "A fever, accompanied in almost every case by a rash like that of measles, was very frequent in London after the greatest violence of the influenza in 1837. Again, during the early months of 1838, and concurrently with as well as subsequently to the influenza, then prevailing in London, the same character of low adynamic fever existed to considerable extent and fatality, attended with an eruption of scarlet, more frequently of dusky red spots. Instances of this nature are very frequent in medical history." From 1842 to 1850 both diseases prevailed in the United States. During 1847–8, a severe epidemic of influenza prevailed in Edinburgh, Dr. Gardiner stating that by it the whole mortality was increased one-seventh. During the same period cerebro-spinal meningitis existed in many parts of Europe. During the six years, from 1854 to 1860, both diseases prevailed in many parts of the world, sometimes in different localities but more often together. Since 1860, it is well known that cerebro-spinal meningitis has prevailed very extensively in various parts of the world, and a study of the subject will show that influenza has been more or less associated with it.

The limits of this essay will not allow me to enter into further details in relation to this highly interesting and important subject, therefore I can only state my belief that future investigation will show that an intimate relation exists not only between epidemic cerebro-spinal meningitis and influenza, but also between these diseases and epidemic dysentery, diphtheria and erysipelas. This opinion may seem visionary, but, with Sir Henry Holland, I believe, "It is probable that we may hereafter learn the virtual identity of many diseases hitherto placed asunder by distinctions which have foundation only in subordinate symptoms, thereby disguising from us what is most important in pathology and practice."

NATURE.

In order that our inquiry into the nature of cerebro-spinal meningitis may be made in a clear and satisfactory manner, it is necessary to sketch rapidly

Digitized by Google

the more prominent symptoms presented by the disease, and the anatomical lesions revealed by post mortem examinations.

It will be anticipated that a disease prevailing so extensively, and under circumstances so widely diverse, has presented a great variety of symptoms, some of them at times seeming from their prominence to be almost characteristic, and at others comparatively unimportant. This is a feature, however, that is by no means confined to this disease, and one that often leads to errors in diagnosis and treatment. For my present purpose it will be sufficient to notice only the symptoms most commonly observed during an attack of the disease.

In its mode of invasion the disease presents great variety. In some cases it makes a sudden attack, prostrating the patient without warning, but more often certain symptoms indicate its approach. These are usually loss of appetite, headache of greater or less severity, chills, nausea and vomiting, pain in the spine, and wandering neuralgic pains in the limbs, very closely resembling those met with in the beginning of an ordinary catarrh. Debility is almost uniformly present, amounting sometimes at a very early stage to extreme prostration. These symptoms may last for a period varying from two hours to many days. Gradually, however, the case assumes a more serious aspect. Very often the more serious symptoms are ushered in by a severe chill, the headache increases, the pain becoming of a lancinating character, at the same time the patient complains of a feeling of tension about the head or as if it was tightly compressed by a band of iron. Very often severe pain is complained of in the upper part of the spine, from whence it radiates in every direction without intermission. Hyperæsthesia of the surface of the body is very often met with, touching the skin or moving the limbs giving severe pain; this symptom is a very characteristic one, and is rarely absent. The countenance may be livid or pale, and is often in the severer cases shrunken. The temperature of the skin varies greatly, being sometimes above that of health, but more often it is below. The pulse is usually more frequent than in health, but presenting no peculiarity except that is very soft and compressible. The tongue is moist and covered with a whitish coat, in the worst cases it may become red and shining or brown and dry. Constipation usually exists after the disease becomes established, although diarrhœa may sometimes be met with. The conjunctiva is red and congested. Strabismus and double vision are not uncommon. Very frequently there is tonic contraction of the muscles of the neck and spine, causing the head to be thrown back, and in some cases marked opisthotonas. Muscular tremors are very commonly seen, and sometimes general convulsions. More or less mental disturbance is noticed at an early period in the severer cases. This may manifest itself by a morbid vigilance, with an anxious restless expression of countenance, quiet delirium, the wildest maniacal ravings, or incoherent mutterings. Death is always preceeded by stupor or coma.

Eruptions constitute one of the special features of the disease. They nearly always make their appearance early in the progress of the disease, and vary greatly in character, sometimes resembling roseola, measles or the

Digitized by Google

rash of typhus. In some cases petechia vibices or extensive echymoses occur very early in their progress, constituting at times the first diagnostic mark of the disease. The eruption, however, is not a necessary feature of the disease, for it is not rare to find cases in which it runs its entire course, without any kind of an eruption being seen. When the attack has been severe, the return of health is long delayed.

Anatomical Appearances.—These will be found to vary with the intensity, character and duration of the disease. Usually cadaveric rigidity is well marked, patches of a livid color are observed on the posterior portions of the body, the muscles everywhere exhibit a deeper shade of color than natural, the blood is found to be dark and fluid, or containing soft clots, giving evidence of its disorganization. This condition is met with even when death has occurred at a very early period after the attack. The microscope shows the red corpuscles to be shrivelled or crenated on their margins, and not arranged in the ordinary *rouleaux*.

The lungs, heart, stomach, intestines, liver, kidneys and spleen, show a variety of lesions in fatal cases of this disease, depending upon the previous health of the patient and the complications arising during the progress of the case, but these are incidental or rather accidental lesions and do not belong to the pathological history of the disease. It is within the cranium and the spinal canal that we find the characteristic lesions of the disease, except in those cases where death has occurred before the full development of inflammatory action. The lesions of the nervous centers being dependant upon inflammation, it is obvious that they will vary with the duration and severity of the attack. Nearly all the observers of the disease agree that congestion of the brain is present during the first stage, the blood vessels of the dura mater are greatly distended with dark blood, the arachnoid is also much congested. If death has not taken place in the congestive stage, the arachnoid will be found opaque, and the pia mater adherent to the brain. An effusion of serum is commonly found in the cavity of the arachnoid, and in the ventricles. This is sometimes transparent like water, and at others of a red color, at others it contains pus globules or even flakes of pus. In some cases the ventricles are distended with a well marked purulent effusion. A still more conclusive evidence, according to Stille, of inflammatory action, "is a fibrino-purulent exudation in the meshes of the pia mater." The substance of the brain itself is usually softened, the spinal cord presents lesions similar in character to those found in the brain, and it is not necessary to specify them.

After this brief description of the symptoms presented by cerebro-spinal meningitis, and of its anatomical lesions as revealed after death, we come back to the inquiry what is the nature of the disease? Very different answers have been given to this question. Thus, as we have already seen, Dr. Job Wilson believed it to be a malignant form of influenza, and quite recently Dr. Levick, of Philadelphia, seemed to hold a similar belief. Dr. Murchison, of London, believes it to be identical with typhus fever. Many other medical men have held a similar opinion. Thus Gauther, of France, in a report to

Digitized by Google

the Academy of Medicine upon the epidemics prevailing in France from 1841 to 1846, says: "Serait il permis a votre rapporteur d'emette ici, sous sa responsabilitie l'opinion que la maladie appelle meningete cerebro-spinale, ne serait que la forme nerveuse ataxique tetanique du typhus lui meme." Prof. N. S. Davis holds that three or four distinct diseases have been confounded together under the name of cerebro-spinal meningitis. He believes that the first class of cases, "Embracing those most extensively prevalent as well marked epidemics, and tending most rapidly to fatal results, were no more nor less than true erysipelas in which the cerebro-spinal structures with their enveloping membranes constituted the seat of the local inflammatory developments, instead of the fauces or cutaneous surfaces." Another class of cases he believes to be "either forms of modified typhus or scarlatina," and that another class "are simply acute inflammations of the membranes enveloping the cerebro-spinal axis and base of the brain." C. Broussais says that the disease "is an ordinary but violent inflammation which differs from other acute and fatal phlegmasiæ only in its seat." The committee who reported on the disease to the American Medical Association in 1866, believe "*that the disease is essentially a fever, not essentially an inflammation*," holding that the local inflammations are consecutive to the constitutional disturbance, being due to the morbid condition of the blood which provokes exudation, and that their locality is determined by incidental circumstances. Among many others, Dr. Kennedy believes it to be both a blood disease and an inflammation, the latter being much less essential than the former.

I will now proceed to examine somewhat in detail these various doctrines in relation to the nature of the disease in the order in which I have noticed them. In regard to the first, which requires a belief in the identity of influenza and cerebro-spinal meningitis, I need say but little, as very few who have observed the two diseases believe in it. While I have stated my belief that some relationship exists between them owing perhaps to a similarity of the specific causes concerned in their origin, I do not think that any respectable argument can be made in favor of their identity. Indeed the only resemblance that is found existing between them is found, not in the characteristic symptoms belonging to the two diseases, but in the manner of their prevalence. Both are pandemic diseases produced by no known local or atmospheric agencies, attacking large numbers of people at the same time in localities widely distant from one another, and not communicable by contagion, but evidently depending for their origin upon some specific cause. In these respects there is a resemblance between the two diseases, but this likeness does not go beyond this. In the symptoms, progress and termination there are wide differences, as well as in the anatomical lesions resulting from them.

The disease has often been confounded with typhus fever and a great deal has been written to prove their identity, and, as we have seen, some medical men even now hold this doctrine. The best known perhaps of these is Dr. Murchison, who rejects entirely the idea of cerebro-spinal meningitis being a distinct disease. It will not be improper then for us to inquire wherein the

Digitized by Google

two diseases resemble each other, and wherein they differ. The first thing that attracts our attention is the fact that while epidemic meningitis is truly a *pandemic* disease, the other is as certainly an *endemic* disease. The former as has already been shown occurs in places remote from one another, and under circumstances that entirely preclude the idea of communication between the sick and well being necessary for its extension. The other seems to depend upon local causes for its production, and to spread by intercommunication only. It makes its appearance in the outset among the overcrowded, the poor, and the filthy, and is almost universally admitted to be contagious. Cerebro-spinal meningitis on the other hand never originates from local causes alone, and in its outbreak is confined to no class of society, and is certainly not communicable by contagion. Its epidemics most generally occur in winter. The majority of its victims are selected from among young robust males. While the other prevails at all seasons and gathers its victims mainly from among adults.

Both diseases are characterized by an eruption, and the similarity of this —that has often been observed—has perhaps done more than anything else to excite a suspicion of their identity, but careful observation has shown that the eruption furnishes no proof of their being the same. In typhus the eruption is rarely absent, making its appearance between the fourth and seventh days, and when present is uniform in character, being first roseolous and then petechial, echymoses being rarely met with. In epidemic meningitis the eruption is absent in at least half of the cases, and when present is by no means uniform, showing itself sometimes in the form of erythema, roseola, herpes, urticaria and petechia, echymoses being extremely common. These eruptions show no uniformity in their order of appearance, but are usually met with within one or two days after the attack. Marked differences are also presented by the pulse and skin. In typhus the former is nearly always increased in frequency, usually ranging between 90 and 130, while the skin is always above the natural temperature, and does not fall until near the termination of the disease; the skin imparts to the hand a hot pungent sensation. In meningitis the pulse is very frequently not above the natural standard, although it may range greatly above or below this, being, however, almost always uncommonly weak and compressible. The skin, while it presents many variations, is seldom above the natural temperature, the *calor mordax* of typhus is never present. The phenomena presented by the nervous system in the two diseases are also quite different. Delirium is often absent in the latter disease, and when present may present every character, from the hysterical to the low muttering form, showing itself often on the first or second day. The headache is acute and tensive, the patient complaining as if an iron band encircled his head. In typhus a low muttering delirium is seldom absent, and the headache is described as being of a dull and heavy character. In this disease the tongue is most commonly dry and hard, of a brown color, while sordes are seen on the teeth and gums; vomiting is sometimes present, but is not a prominent symptom. In spinal meningitis the tongue is soft and moist, and covered with a whitish coat; sordes

Digitized by Google

on the teeth and gums are rare. Vomiting is one of the most common and urgent symptoms during the early stages. Pain in various parts of the body is a symptom belonging to both diseases, but in the latter it seems to radiate in every direction from the spine, presenting the sharp lancinating character of neuralgia, while in the other it is in the muscles generally, and is dull and heavy. Another feature of difference between the two diseases is presented in the tetanic spasms which make their appearance in the majority of the cases of cerebro-spinal meningitis within the first two or three days, evidently depending upon an exudation within the spinal canal. Tetanic spasms do not occur in typhus, although convulsions are sometimes observed. In this disease the sensibility of the skin is usually less than natural, while decided cutaneous hyperæsthesia is reported to be a very common symptom in the former disease. Still other differences between the two diseases have been noticed—thus in spinal meningitis strabismus is common, the pupils are often unequal, deafness is many times met with, and is often permanent, owing to a disorganization of the internal ear. In typhus, strabismus is said to be rare, the pupils are equal in size, deafness is seldom permanent. There is also a difference in the duration and in the mortality of the two diseases, the average duration of typhus being from twelve to fourteen days, with a mortality of from 8 to 40 per cent.; in the other, while the duration is very uncertain, it varies most commonly from four to seven days, with a mortality of from 20 to 75 yer cent.

The preceding narration of the differences observed between the two diseases is of itself sufficient to settle the question raised as to their identity; if it were not so, the lesions presented by the two diseases upon post mortem examination would do so beyond question. All observers agree in the statement that in cerebro-spinal meningitis, unless death has occurred at a very early period, the brain and its membranes, the spinal cord and its membranes, or both, show upon examination unmistakable traces of inflammatory action. What these are we have stated while describing the anatomical lesions presented by the disease, and it is unnecessary to repeat them here, neither do I deem it necessary to quote a large number of authorities in support of the statement that these inflammatory lesions are always found, when the disease has not proved fatal, at a period before inflammatory changes could take place, because the statement of their existence has been so universal that the fact can hardly be disputed. We need, then, only inquire if typhus leaves behind such traces.

Dr. Murchison, although claiming an identity between the two diseases, says in his work on Fevers, that typhus is never complicated with inflammation of the membranes of the brain; he has, however, admitted since that it may be so in rare instances. Dr. Stille, in speaking of typhus, says: "No stage, grade or usual complication of that disease was ever attended by cerebro-spinal exudation. In the one (cerebro-spinal meningitis) exudative matter is detected by the microscope first, and then in due course by the naked eye; in the other, such matter is discoverable at no stage, and by no method whatever of examination." Dr. Da Costa, in describing typhus fever

Digitized by Google

as it appeared in Philadelphia during the winter and spring of 1864, says, that "in no instance was any sign of inflammation of the *brain* discovered, or did the brain-substance itself look other than healthy. There was no effusion into the ventricles, nor was congestion of the membranes a constant feature; in only a few instances were the veins on the surface filled with dark blood." It is needless to make further quotations, in order to show that the lesions presented by the encephalon and spinal cord after death are entirely different in the two diseases. It is utterly impossible to longer believe in their identity, unless we suppose on the one hand that all the writers who have described typhus fever have incorrectly reported its anatomical lesions, or on the other, that they who describe those belonging to cerebro-spinal meningitis have been mistaken in the belief that they almost universally found in the membranes of the brain and spinal cord traces of inflammatory action. To accept either hypothesis is simply ridiculous.

Prof. Davis is, so far as I know, almost alone in his theory of the mixed character of the disease, and he has supported it by so few facts that very few medical men will likely be inclined to adopt it without further proof. While it may be true, as he states, that "well marked cutaneous erysipelas" has often prevailed immediately preceding or concurrently with epidemic cerebro-spinal meningitis, this fact alone affords no more proof of their identity than the presence in the same locality, at or near the same time, of small pox, and cerebro-spinal meningitis proves then to be the same disease. If the two diseases had been usually observed prevailing together, or one commonly succeeded the other, it might afford ground for the belief that there was some relationship between them, but my reading does not convince me that this coincidence has been very frequently noticed. The same observations may be made with reference to scarlatina. The question of the disease being the same as typhus has already been discussed, and I think it will be made evident further on that the disease can not be simply an inflammation "of the membranes enveloping the cerebro-spinal axis and base of the brain," as Prof. Davis would have us think is sometimes the case. The theory of C. Broussais will be sufficiently refuted in the same connection.

The theory "*that the disease is essentially a fever and not essentially an inflammation*," is not well supported by facts, for not only are certain of the phenomena of fever absent in many of the cases, but the inflammatory lesions are so uniformly and visibly present after death, that we may legitimately conclude that inflammation is an essential element of the disease, and that its lesions are as much the result of the direct action of the unknown epidemic cause as is the disorganization of the blood. We can not rationally conclude that the general disorder of the system and the morbid changes in the blood proceed from the local inflammation, meeting, as we do, with cases in which death precedes its establishment, any more than we can that the inflammatory lesions are incidental or accidental circumstances, resulting from a morbid condition of the blood. We can not, by any process of sound reasoning, make either the disorganization of the blood or the local inflammation dependent on the other. I believe, then, that we must assign to the disease

Digitized by Google

a compound nature, and conclude that it is both a blood disease and an inflammation. That there is a septic or zymotic element essentially belonging to it as well as an inflammatory one, is I think clearly evident.

The only constant pathological condition that has been observed is an altered state of the blood. A number of observers who have examined the blood drawn from patients laboring under the disease, by venesection during life, declare that it always presents traces of inflammatory action. Whether this is true or not, it is pretty evident that in many cases a partial disorganization of this fluid exists even before death. There is evidence of this presented in the petechia and extensive echymoses which so often precede the destruction of life, and its nearly uniform dark fluid condition, as well as the altered state of the corpuseles noticed after death, lead to the same conclusion. Although in the majority of cases we find evidence of this disorganization of the vital fluid, we are not therefore to conclude that death results in all cases from this change, for it is evident that it may take place from causes that are independent of such an altered state. The inflammatory element in these cases so preponderating over the septic element of the disease as to destroy life by a direct interference with the functions of the brain and spinal cord, and we may conclude that it was cases of this kind which, falling under the observation of Broussais, and others who believe with him, that this disease does not differ from an ordinary inflammation, except in its location, that led to such a conclusion.

As will readily be inferred from what has been already stated, I am led to conclude that cerebro-spinal meningitis "is *sui generis*, different from all others etiologically and pathologically;" that both elements, the septic and the inflammatory, are essential to the disease, both being the effect of the direct action of a specific cause. Either of these elements may preponderate over the other, and as the one or the other does so, will the disease assume more of the sthenic or asthenic character.

TREATMENT.

Upon no question in relation to cerebro-spinal meningitis has there been more opposite opinions held by the profession than has been in regard to the treatment of the disease, and this is scarcely to be wondered at, when we remember the great diversity of type and tendency that it has at various times presented. These differences are observed in all diseases, for the almost infinite variety of circumstances by which manking are surrounded constantly exert an influence upon him when in health, but much more certainly and obviously when the vital forces are lowered by disease. It is for this reason that diseases of the most simple character present widely different symptoms during their course among different classes of people and at different periods. If these surrounding influences exert so great control over the simpler diseases, how much more certain it must be that a disease depending for its origin upon a specific cause which acts primarily both upon the blood and upon the great nerve centers, greatly depressing the vitality of the patient from the very commencement, will be modified by these influences

Digitized by Google

and consequently present the greatest diversity of symptoms. We have seen that as the septic, or the inflammatory element preponderates, the type of the disease varies, and as many medical observers have founded their conclusions in relation to the essential nature of the disease from what they themselves have observed, one class is thoroughly convinced that the disease is essentially an inflammation, and that active antiphlogistic treatment is indicated for the relief or cure of the active inflammation of the membranes of the brain and spinal cord, the presence of which is indicated by well marked symptoms. Another, meeting with the adynamic type of the disease in which extreme debility forms the characteristic symptom, is led to adopt the most vigorous, stimulating and tonic treatment possible. And so, during epidemics presenting not only these two extreme types of the disease but the almost infinite variety formed by their various combinations, one practitioner has been found bleeding his patients to the extent of eighty ounces within twenty-four hours, (*Ames*,) and another giving a quart of brandy in six hours, (*Arnell*,) and still another administering half an ounce of the tincture of opium in an hour, or a drachm of opium in substance in twelve hours. (*Miner*.)

These are of course uncommon examples, but they serve to show to what extremes medical men have gone in their efforts to cure this affection, as well as to point out the two very dissimilar methods of treatment that have been most commonly adopted—the antiphlogistic and the stimulant. When the diseases first appeared in this country, one party used the lancet freely, and put in practice the whole antiphlogistic plan of treatment, while another, believing with Strong that the necessary thing to do "Is to support the vital energy, to raise the patient from his depressed state, and to hold him up till the disease passes off," pursued precisely the opposite plan, giving stimulants and tonics with an unsparing hand.

The same diversity of practice which characterized these earlier observers, continues to exist even at the present day, and will continue to do so, so long as the medical men who observing the disease recognize only one of its elements, and ignore its complex nature. It is true that one or the other of these elements in the majority of cases predominates over the other, and this fact affords an explanation of these opposite plans of treatment, and while it is true that this circumstance must necessarily lead to great modification in the management of different cases, it cannot justify the one-sided theory of treatment held by so many medical writers.

General depletion, as has been stated, has had many warm supporters, yet even when blood letting was fashionable in the treatment of nearly all diseases, and during epidemics when the disease manifested most frequently its inflammatory character, the weight of medical testimony was opposed to its use, and at the present day when general depletion is rarely heard of, scarcely a single writer, in this country at least, recommends general bleeding in any case of the disease, so that it is unnecessary to present any arguments against the practice.

Digitized by Google

Local depletion, by means of leeches and scarified cups to the nape of the neck and along the cervical vertebra, has been claimed to be of great service in relieving the neuralgic pain which so often occasions great suffering. In very many cases even this trifling loss of blood cannot be borne by the patient, for the observation has often been made that in young persons, more particularly children, a very small loss of blood may be fatal, or followed by dangerous exhaustion. The loss of blood is a subtraction from the sum total of the patient's vitality which is already much below par, and as in the present state of pathological knowledge we cannot suppose that such a procedure will be instrumental in lessening the inflammatory action, such a practice cannot be considered as judicious even though it does have some control over the pain, since this can be relieved by other measures to which no objection can apply.

Emetics, by some authorities, have been recommended in the early stage of the disease. Thus Vieusseux declares that "the first, the principal, and often the only remedy," which was found necessary, was tartar emetic in half grain doses repeated every ten minutes until free vomiting was produced, and this recommendation was made from observations during an epidemic in which the septic element seemed to predominate. Such a plan of treatment has, however, found but few advocates; the majority of observers declaring against the employment of emetics. Among others, who have objected to their use, as not only doing no good but doing positive harm, Miner says, that they are "liable to produce uncontrollable vomiting, and therefore dangerous exhaustion." I do not know that any one has insisted upon their use during the epidemics of the last few years.

Purgatives, in the treatment of cerebro-spinal meningitis, have never had many advocates. The large majority of writers agree that they should not be employed, as they do positive injury.

Cold to the head and spine has been extensively made use of in this disease, and its employment would very naturally seem to be indicated, both by the pain complained of and the inflammatory action that is known to be going on within the head and spinal canal. In practice it has been found to be more valuable than all the other antiphlogistic remedies combined, probably not because it exerts a controlling influence over the inflammation, but from the fact that, in the early stage of the disease at least, it exercises a soothing influence over the patient and relieves pain.

Blisters, to the back of the head and neck have been extensively employed, both for the purpose of relieving pain in these parts and with the idea that they would control the inflammation existing in the brain and spinal cord. They have also been applied to various parts of the body as general stimulants. American testimony is largely in favor of their application to the upper part of the spine and back part of the head in the *early* part of the disease. While it cannot reasonably be supposed in the present state of our knowledge concerning the nature of inflammation, that they can exert any decided influence over either the course or termination of the disease, it is probable that they occasionally relieve pain by their revulsive action. When

Digitized by Google

this has been said, all has been admitted that can be urged in their favor. When the material changes that are going on in the nerve centers are remembered, and upon which depends the delirium, spasm and coma, we can have but little hope of their exercising a salutary influence over the course of the disease.

Warm baths, heat, to the surface, and *frictions,* have played an important role in the treatment of epidemic meningitis. During the earlier epidemics in this country it was considered absolutely necessary by most practitioners to apply heat in some manner to the surface of the body. Various methods of accomplishing this end were in vogue. Sometimes the patient was placed in a hot bath; at others he was laid in bed between blankets and bottles of hot water, or billets of wood heated in boiling water and wrapped in flannel placed about him. At others the body was wrapped in flannel wrung out of boiling water; sinapisms were applied to the feet and legs, the patient being made at the same time to drink large quantities of warm liquids, often with wine or brandy, it being deemed necessary to excite and keep up gentle sweating for twenty to forty hours. This method of treatment has fallen into disuse, although it was resorted to by some practitioners during our later epidemics, and as they report with satisfactory results. Some physicians applied external warmth by means of flannel bags containing roasted salt, laid along the spine. In some of the more severe cases I believe that hot baths are indispensable.

Internal stimulants. A great diversity of opinion and practice has prevailed among the profession in relation to the beneficial influence of this class of remedies. The earlier American physicians being possessed with the idea that debility was the chief element of danger, and that almost the only indication of cure was to support the vital energy, regarding the inflammatory element when they recognized it as being entirely subordinate, and having their attention directed to the evidences of a typhoid state, they were led to place their chief reliance upon alcoholic stimulants. These were used with what would now seem to be very little discretion. During the more recent epidemics, however, they have been assigned to a very subordinate position in the treatment of the disease, more so than deserved, for while administered indiscriminately and in large quantities they are likely to do serious mischief by intoxicating the patient and favoring the condition they are intended to relieve, judiciously made use of they are of the greatest value.

Opium. This is a medicine that like the others most often used in the treatment of epidemic meningitis, has been by some lauded as the only sovreign remedy for the disease, being employed for the relief of the pain, vomiting, diarrhœa, sleeplessness and coma. The heroic manner in which the remedy has been prescribed is surprising, and as a matter of curiosity merely it may be worth while to cite some examples of this. Strong reports a case in which violent pain in the head and maniacal delirium were the predominant symptoms. "Sixty drops of laudanum were administered every hour until four hundred and eighty drops, or half a fluid ounce, had been taken in eight hours. The whole of it was retained, and it subdued the

Digitized by Google

excitement and allayed the pain, but produced no sleepiness nor any other apparent effect of opium." Haskell states that he was frequently obliged to give ten grains at a dose in some of the worst cases. Miner says that "a few cases imperiously required half an ounce of the tincture in an hour before the urgent symptoms could be controlled. In some cases it was necessary to give a drachm of opium in substance in twenty-four hours for this purpose. All of these patients recovered." He believed as we would expect, after learning of his fearless administration of the drug, that "Opium was the most important remedy in the severer forms of the disease." Others who were familiar with this mode of treatment regarded it as not only failing to cure the disease, but as often producing ill effects, they therefore, very improperly as we may believe, rejected the medicine entirely. Most European physicians made use of this remedy, but prescribed it in much smaller doses, regarding it as a palliative and not a curative agent Some others, however, like Chauffard and Boudin, administered it in doses of from three to fifteen grains. These observers claimed that in this disease there is a remarkable tolerance of the medicine and regarded it as the most efficacious remedy used in the treatment of epidemic meningitis.

Among the late observers much variety of opinion exists as to the value of the treatment with opium, and none perhaps advocate the administration of the enormous doses above noticed. It has nevertheless been more extensively used during even the later epidemics than any other remedy, and from the result of experience, as well as from its known value in the treatment of nearly all of the inflammations, we may safely conclude that in the earlier stages—the only period when we can hope for the curative action of remedies—it will fill more indications and exert a greater controlling influence over the disease than any other, or indeed all other remedies together.

Quinine has been very largely used in the treatment of cerebro-spinal meningitis, particularly during the last few years. Very often the disease exhibits some evidence of periodicity, and the known value of the remedy in most cases where this feature is observed, led to the hope that in this disease, also, it would exercise a like favorable influence, but unfortunately these expectations have almost invariably ended in disappointment. It has been given to the extent of sixty to seventy grains within twelve hours from the first attack, but without effect. In some cases where there is a malarious complication, as shown by marked periodicity in the pain and spasms, it may prove serviceable in the way of removing this complication, but over the essential disease it probably exercises no control whatever.

Mercurials have entered very generally into the treatment of epidemic meningitis, having been used in almost every form, and in the smallest as well as in the largest doses, with the result of bringing most observers to the conclusion that the proofs of its curative action are very problematical. Even those observers who regard the disease as essentially an inflammatory one, and who are most strongly fixed in the belief that mercurials do have a controling influence over the ordinary forms of inflammation, have been forced to admit that its good effects in this disease are, to say the least, equivocal.

Digitized by Google

If epidemic meningitis be regarded as a zymotic or blood disease, analogy as well as the known effects of the medicine, would forbid its use; while on the other hand, if it be regarded as primarily an inflammation we can not expect it to stay the progress of the disease, for the opinion is rapidly gaining ground among enlightened therapeutists that mercury does not influence the progress of any of the non-specific forms of inflammation.

Many other remedies have at various times been held to be of great service in treating the disease; among these may be noticed the *arsenite of potassa*, a remedy that has been held to be of decided value in the treatment. No positive testimony has, however, been adduced in support of this opinion. *Iodide of potassium* has been used on theoretical grounds, for the purpose of causing the absorption of inflammatory products during the decline of the disease. On the supposition that the statement of Brown-Sequard was true, that *belladonna* and *ergot* diminish vascular action in the cerebro-spinal axis, a number of physicians have, on theoretical grounds purely, been led to the use of these medicines in the treatment of this disease, but as yet no evidence has been presented that establishes the fact of their exercising any curative influence over it.

Sulphites of soda and lime have been recommended on the ground of their known control over symosis. Chlorate of potassa, carbonate of ammonia, permanganate of potassa, tincture of cantharides, veratrum viride and aconite have all had their advocates.

The mere enumeration of these various remedies, together with the notice I have made of the opposite plans of treatment that has been proposed, establishes the fact that all plans of treatment have been followed by unsatisfactory results. If this were not so, a study of the rate of mortality presented by the disease would lead to the conviction that in all probability none of the plans of treatment hitherto adopted have had much influence over the fatal tendencies of the disease. The mortality has of course varied greatly during different epidemics; in some not more than 20 per cent. of the cases have been fatal, while in others it has ranged everywhere from this rate up to 75 per cent., and it is a significant fact that this death rate has obtained under all of the plans of treatment above noticed. It is a gratifying fact, however, that, as stated by Prof. Little, "while ten epidemics in various places, occurring between 1838 and 1848, presented an average mortality of 70 per cent., a similar number, occurring during the decade from 1855 to 1865, give an average mortality of about 30 per cent." While it may be true, as Prof. Stille suggests, that this may "indicate a general decline of power in the epidemic cause," it is equally as possible that a part at least of this remarkable difference may be owing to a less perturbating and less active treatment than that practiced during the former decade.

After what has been said, it may be inferred that I have no detailed plan of treatment to present. No precise rules can be laid down for the proper management of patients suffering with a disease so protean in character as this. Each individual case is a problem to be studied, and the treatment must be determined by the results of its solution. While this is true, it does

Digitized by Google

not follow that the physician is left without a clue to the appropriate treatment of the disease, for there are certain great principles of therapeutics underlying the science of medicine which, if recognized, will form the basis of a judicious and successful treatment.

I may, in a few words, sketch a plan of treatment which I conceive to be warranted by the facts known in relation to the disease. In the first stage if coldness of the surface exists, the patient should be placed in a hot bath, and afterward rubbed with coarse towels or flannel, and placed in bed. If there is decided prostration, alcoholic stimulants or ammonia should be given. Should there be severe pain or excessive hyperæsthesia of the surface, morphia, in sufficient doses to relieve them, should be administered by the mouth or by hypodermic injection. From the well known effect of bromide of potassium, when administered for the relief of somewhat similar symptoms in other diseases, I should expect it to prove of great value in the treatment of cerebro-spinal meningitis, when administered for the relief of the symptoms just mentioned, or on account of the excitable condition of the nervous system so often present. During the early stage, if the pain and spasms are decidedly periodical in character, quinine may be administered in full doses. For controlling the inflammatory action, the chief reliance must be placed in opium or its alkaloids. General depletion is not to be thought of. Local depletion exhausts, and blisters, or ice to the head or spine, disturb and worry the patient, without in all probability exercising any influence over the intracranial inflammation. I should administer muriatic acid, particularly in those cases where the specific cause of the disease seems to expend its force chiefly on the blood, as shown by the great debility and occurrence of petechia and echymoses, for the reason that in such cases the blood very nearly resembles that found in purpura and scurvy. In these diseases, as well as in cerebro-spinal meningitis, it is partially disorganized, as shown by its dark fluid condition and altered state of the corpuscles. Experience has demonstrated that in purpura and scurvy, as well as in typhus and typhoid fevers, acids are of decided value in the treatment, and by analogy we may infer that they would prove equally as serviceable in this disease. Muriatic acid is preferred, because it is one of the natural constituents of the body, and also because it is known to exercise a powerful influence over the decomposition of animal matters.

As to the use of alcoholic stimulants the physician should be guided almost entirely by the condition of the nervous system. Complete prostration, muscular tremors, and delerium of a low muttering character, indicate their use, as these symptoms show that the nervous system is weakened by the destructive metamorphosis going on in the blood. Whisky or brandy may be used, either alone or in the form of milk punch.

The proper administration of food comprises a very important part of the treatment. A portion of the blood is dead, and without a supply of material this loss can not be replaced, therefore nourishing food should be supplied. Its quality must, of course, greatly depend upon the condition of the patient. In the worst cases solid food can not be assimilated; in such cases milk, beef

Digitized by Google

tea or the essence of beef will be appropriate. These should be administered in small quantities, at regular intervals. Whenever the stomach can properly dispose of them, soup, oysters, eggs, etc., may be allowed. In a word, the patient should be supplied with "the most nutritious food that can be digested."

The patient should be prohibited from making any unnecessary exertion, kept quiet, and so far as the general management is concerned, it should be similar to that adopted in other low forms of disease.

The sequelæ require no special notice, as when they are met with they must be treated on general principles.

It will be seen that I advocate no specific form of treatment, and believe that the essential thing to do is to husband the little life left in the patient. The best method of doing this can only be determined by attending to the circumstances surrounding each individual case.

The disease is one that attacks the very citadel of life, and all the symptoms presented are but the evidences of the successful inroads made by the enemy, therefore a constant vigilance must be maintained in order to meet these assaults, to repair the breaches made, and to guard carefully the resources yet available. The best methods of accomplishing these ends must be left to the judgment of the physician who witnesses the exigencies arise.

There is reason to believe that in the future our knowledge in relation to the first beginnings of the disease will be greatly increased, and that we will be able to discover the first aberation of the healthy state produced by the action of the specific cause of the disease. Then, and not till then, may we hope, by a *coup de main*, to arrest the disease in its very inception.

Digitized by Google

Digitized by Google

TRANSACTIONS

OF THE

INDIANA STATE MEDICAL SOCIETY

AT ITS

EIGHTEENTH ANNUAL SESSION.

INDIANAPOLIS, TUESDAY, May 19, 1868.

The Indiana State Medical Society assembled in the Senate Chamber, and was called to order by Dr. V. Kersey, the retiring President, who introduced Dr. J. S. Bobbs, the President elect, who said, on taking the chair:

GENTLEMEN OF THE INDIANA STATE MEDICAL SOCIETY:—It is proper for me, in undertaking to preside over your deliberations, to return my acknowledgments for the honor you have conferred upon me. I shall do my best to discharge impartially the duties of the position, but should I fail to meet your expectations, I hope for your forbearance. The Society is now ready for business.

Digitized by Google

On motion of Dr. R. A. Curran, a recess of fifteen minutes was taken, to allow members and delegates to enroll their names.

Dr. John Moffett announced the readiness of the Committee on Credentials to receive credentials of Delegates.

The Secretary reported that the following permanent members were present, and had paid their annual assessment:

NAME AND RESIDENCE.	NAME AND RESIDENCE.
Corydon Richmond, Kokomo.	M. H. Bonnell, Lebanon.
William Scott, Kokomo.	R. Brand, Lebanon.
W. K. Mavity, Kokomo.	A. O. Miller, Lebanon.
J. H. Woodburn, Indianapolis.	James Evans, Lebanon.
Thos. B. Harvey, Indianapolis.	John Rea, Newcastle.
H. F. Barnes, Indianapolis.	Dougan Clark, Richmond.
G. V. Woolen, Indianapolis.	Vierling Kersey, Richmond.
R. N. Todd, Indianapolis.	James F. Hibberd, Richmond.
F. S. Newcomer, Indianapolis.	F. J. C. Rawlins, Elizabeth City.
James S. Athon, Indianapolis.	A. C. Dillon, Knightstown.
J. J. Wright, Indianapolis.	George Sutton, Aurora.
Wilson Lockhart, Indianapolis.	John Arnold, Rushville.
L. D. Waterman, Indianapolis.	Marshall Sexton, Rushville.
James K. Bigelow, Indianapolis.	J. J. Rooker, Castleton.
W. J. Elstun, Indianapolis.	T. B. Cox, Frankfort.
W. N. Duzan, Indianapolis.	John Moffett, Rushville.
John M. Kitchen, Indianapolis.	Wm. F. Harvey, Plainfield.
W. C. Thompson, Indianapolis.	E. H. Crippen, Moscow.
Boswell Ward, Indianapolis.	W. R. Winton, Wabash.
J. P. Avery, Indianapolis.	H. P. Ayres, Fort Wayne.
John A. Comingor, Indianapolis.	R. G. Graydon, Southport.
Theophilus Parvin, Indianapolis.	W. H. Wishard, Southport.
A. M. Vickrey, Tipton.	S. W. Rodman, Zionsville.
M. V. B. Newcomer, Tipton.	B. Cramer, Thorntown.
E. M. Morrison, Noblesville.	N. Mendenhall, Thorntown.
Joseph Stephenson, Pendleton.	I. E. Kirk, Dover.
S. D. Day, Shelbyville.	John Lewis, Ogden.
J. M. Bell, Dublin.	I. N. Craig, Bridgeport.
R. A. Curran, Huntington.	A. G. Preston, Greencastle.
W. B. Lyons, Huntington.	J. T. Jones, Franklin.
J. W. Martin, Lebanon.	Joel Pennington, Milton.

Dr. John Moffett, chairman of the Committee on Credentials, reported favorably on the credentials of the following

Digitized by Google

Delegates, who were present, who paid the annual assessment, and became permanent members of the Society:

NAME.	POST OFFICE.	SOCIETY.
William Freeman.....	Pennville	Jay County Medical Society.
J. E. Markle.....	Portland.....	Jay County Medical Society.
J. V. Hoss.....	Oakford.....	Howard County Medical Society.
J. H. Stuart.....	Spiceland	Union County Medical Society.
Chas. E. Wright.....	Indianapolis...	Indianapolis Academy of Medicine.
Chas. L. Garner.....	Indianapolis...	Indianapolis Academy of Medicine.
R. Tobey.....	Lagro.....	Wabash County Medical Society.
J. R. Weist.....	Richmond.....	Wayne County Medical Society.
A. M. Porter	State Line.....	Warren County Medical Society.
Geo. Rowland.....	Cole creek.....	Fountain County Medical Society.
T. H. Lane.....	Lebanon.....	Boone County Medical Society.
J. M. Boyd.....	Thorntown	Boone County Medical Society.
R. A. Williamson.....	Lebanon.....	Boone County Medical Society.
W. T. Cleland.....	Kewana.....	Brainard Medical Society.
S. C. Thomas.....	Milroy	Rush County Medical Society.
A. Carley.....	New Salem....	Rush County Medical Society.
Robt. Winton.....	Muncie	Delaware County Medical Society.
G. W. Zimmerman....	Wheeling.....	Delaware County Medical Society.
N. D. Clauser...	Hartford City..	Blackford County Medical Society.
F. J. Vanvorhis.....	Stockwell	Tippecanoe County Medical Society.
J. P. Wallace.....	Lafayette.....	Tippecanoe County Medical Society.
Lewis Williams.....	Marion	Grant County Medical Society.
William Lomax.....	Marion	Grant County Medical Society.
H. Benedict.....	Cadiz	Newcastle Medical Society.
F. H. Sale	Dillsboro.....	Dearborn County Medical Society.
J. S. Ferris.....	Barkersville....	Johnson County Medical Society.
H. D. Wood.....	Metz	Steuben County Medical Society.
W. Alphonso Wood...	Angola	Steuben County Medical Society.
F. W. Beard.....	Harrodsburg...	Monroe County Medical Society.

The following permanent members sent their annual assessment to the Secretary:

NAME AND RESIDENCE.	NAME AND RESIDENCE.
H. V. Passage, Peru.	Lavanner Corey, Warren.
James Cochran, Spiceland.	James S. Shively, Marion.
Joseph A. Stillwell, Brownstown.	Geo. Egbert, Xenia.
C. Lomax, Marion.	Alpheus Henley, Fairmount.
S. S. Horne, Jonesboro.	N. P. Howard, Greenfield.
Henry Charles, Jonesboro.	C. E. Riggs, Rigdon.
A. D. Kimball, Xenia.	S. H. Charlton, Seymour.

Digitized by Google

The following members of Auxiliary Societies sent to the Secretary the annual assessment for 1868:

NAME AND RESIDENCE.	NAME AND RESIDENCE.
Jas. C. M. Neal, Marion.	D. H. Elliott, Fairmount.
A. M. Thomas, America.	James H. Bates, Jonesboro.

The following names were stricken from the roll of the Society, in accordance with the requirements of section 6 of the by-laws:

NAME.	POST OFFICE.	SOCIETY.
L. J. Francisco.....	Richmond.....	Wayne County Society.
A. H. Bryan.....	Indianapolis....	Indianapolis Academy of Medicine.
D. Wiley.....	Indianapolis....	Indianapolis Academy of Medicine.
S. A. Butterfield.....	Indianapolis....	Indianapolis Academy of Medicine.

The following member was reported as having died during the past year:

John T. Floyd, Noblesville, Indiana.

The following is the result of the call of the Special Committees:

CHOLERA.—Dr. George Sutton. Report ready.
SURGERY.—Dr. Wm. Lomax. Report ready.
DISEASES OF FEMALES.—Dr. T. Parvin. Report ready.
OBSTETRICS.—Dr. G. W. Mears. Report ready.
THERAPEUTICS.—Dr. F. S. C. Grayston. Not present.
ERYSIPELAS.—Drs. Comingore and Preston. No report.
PATHOLOGY OF DIPHTHERIA.—Dr. J. F. Hibberd. Report ready.
MEDICATED INHALATIONS IN PULMONARY DISORDERS.—W. S. Haymond. Not present.

Dr. N. Field stated to the Society that he had on hand a report on cholera, which he had made to the Clark County Medical Society, to read.

Dr. V. Kersey announced a volunteer paper on the "Biliary Functions."

Digitized by Google

Dr. H. P. Ayres announced a volunteer paper on "Indiana's Idiotic Children." The education of this unfortunate class of humanity is a subject enlisting the attention of the most learned men of the profession in other States, and had commanded the attention of the American Medical Association. He thought it a duty incumbent on the Society to bring the question before the State Legislature, in order to bring about an amelioration of the condition of that unfortunate class of imbeciles. And in order to scatter facts as far as possible, he had concluded to offer a statistical paper on the subject.

The President announced his Address as next in the order of business; but, on motion, it was made the special order for the evening session.

Dr. L. D. Waterman, the Secretary, offered the following report, which was referred to the Committee on Finance:

SECRETARY'S REPORT.

Your Secretary would respectfully report that he has received, since the publication of the Transactions for 1867, for assessments for 1867, two dollars each from

NAME AND RESIDENCE.	NAME AND RESIDENCE.
John Ransom, Dundee.	S. W. Purviance, Crawfordsville.
J. Hudson, Hartford City.	A. B. Ferris, New Paris.
W. H. Wheeler, Hartford City.	S. H. Kersey, Westville.
Wm. Freeman, Pennville.	S. B. Harriman, Richmond.
L. J. Ham, South Bend.	Elias Fisher, Richmond.
L. Humphreys, South Bend.	Israel Tennis, Richmond.
W. W. Butterworth, Mishawaka.	M. W. Hobbs, Richmond.
J. R. Brown, South Bend.	Edwin Hadley, Richmond.
S. Lanning, North Liberty.	H. P. Ayres, Fort Wayne.
S. F. Myers, South Bend.	A. T. Aitkin, Monroeville.
J. C. Sack, South Bend.	W. N. Duzan, Indianapolis.
J. M. Stover, South Bend.	A. M. Porter, State Line.
C. H. Applegate, South Bend.	A. G. Porter, State Line.
Isaac M. Rosenthal, Fort Wayne.	J. G. Blanchard, State Line.
J. H. Donnell, Franklin.	F. B. Campbell, Marshfield.
Wm. A. Webb, Franklin.	Wm. Messner, Pine Village.
W. M. Provence, Franklin.	R. J. Simpkins, Williamsport.
W. C. Bice, Bluff Creek.	M. B. Fields, Tampico.

Digitized by Google

NAME AND RESIDENCE.	NAME AND RESIDENCE.
—— Marshall, Ninevah.	S. G. Rodman, Zionsville.
—— Ream, Ninevah.	A. O. Miller, Lebanon.
M. Sexton, Rushville.	J. M. Boyd, Thorntown.
Joel Pennington, Milton.	M. V. McKinney, Lebanon.
A. B. Bradbury, Milton.	R. B. Jessup, Vincennes.
T. F. Sweeney, Milton.	James Cochran, Spiceland.
J. Q. A. Robins, Abington.	R. Tobey, Lagro.
Nathan Johnson, Cambridge City.	W. G. Armstrong, Lafountain.
L. R. Johnson, Cambridge City.	P. G. Moore, Rich Valley.
S. D. Personett, Greensfork.	J. D. Loder, Stockdale.
T. J. Courtney, Hillsborough.	J. L. Dicken, Wabash.
Harlan Harrison, Newport.	Nathan Mendenhall, Thorntown.
W. K. Mavity, Kokomo.	W. L. Bowman, Thorntown.
Wm. Scott, Kokomo.	G. W. Zimmerman, Wheeling.
Geo. W. Clippinger, Indianapolis.	H. D. Wood, Metz.
N. H. Canaday, Knightstown.	R. N. Todd, Indianapolis.
N. Field, Jeffersonville.	S. D. Day, Shelbyville.
R. G. Graydon, Southport.	Isaac Mendenhall, Newcastle.
R. A. Williamson, Lebanon.	S. M. Linton, Columbus.
L. O'Neal, Somerset.	

June 30th, 1867.	To cash from yearly assessments	$228 00
June 1st, 1868.	To cash from yearly assessments	366 00
June 1st, 1868.	To cash for extra Transactions of Drs. Hibberd and Woolen	8 25
June 1st, 1868.	To cash paid on 1869 by S. M. Linton, Columbus,	1 00
June 1st, 1868.	To cash over paid in 1867 by S. W. Thompson, Evansville	1 00
	Total received	$604 25

May 23d, 1867.	Paid W. B. Lyons, Treasurer	$219 00	
Aug. 1st, 1867.	Paid W. B. Lyons, Treasurer	60 25	
May 1st, 1868.	Paid W. B. Lyons, Treasurer	81 42	
May 20th, 1868.	Paid W. B. Lyons, Treasurer	200 00	
June 30th, 1868.	Paid W. B. Lyons, Treasurer	43 58	
		$606 25	
	Total paid W. B. Lyons, Treasurer		$604 25

L. D. WATERMAN, *Secretary.*

Digitized by Google

Dr. W. B. Lyons, Treasurer, offered the following report, which was referred to the Committee on Finance:

TREASURER'S REPORT.

			Dr.
1867.	To balance from last year		$181 01
"	May 23d, Received, Dr. Waterman		219 00
"	Aug. 1st, Received, Dr. Waterman		60 25
1868.	May 19th, Received, Dr. Waterman		81 42
	Total		$541 68
Cr.			
1867.	By cash paid Reporter	$40 00	
"	By cash paid Hall rent	15 00	
"	By cash paid Douglas & Conner	305 64	
"	By cash paid L. D. Waterman	12 77	
			$373 41
	Balance on hand		$168 27

W. B. LYONS, *Treasurer.*

Wm. Wands, Librarian, stated, that as no books or property of any kind had been placed in his care, he had no report to offer.

The Committee on Publication submitted the following report, which was adopted:

REPORT OF COMMITTEE ON PUBLICATION.

Your Committee on Publication would report that they have published, since the last annual meeting, five hundred copies of the Transactions of 1867, at a cost of $305.64, of which $8.64 was for paper and presswork for republishing one sheet of the Transactions, necessitated by the discovery of discreditable errors. The postage on each copy of the Transactions sent through the mail was two cents.

A copy of the Transactions was sent to every permanent member of this Society who paid his annual assessment, and to every member of the following Tributary Societies: Newcastle, Henry county, 10 copies; Blackford county, 16 copies; Howard county, 26 copies; Warren county, 13 copies; Clark county, 19 copies; Indianapolis Academy of Medicine, 42 copies; St. Joseph county, 17 copies; Union, (Rush, Henry and Hancock counties,) 14 copies; Tippecanoe county,

Digitized by Google

12 copies; Hendricks county, 22 copies; Delaware county, 27 copies; Wayne county, 24 copies; Dearborn county, 14 copies; Grant county, 17 copies; Boone county, 16 copies; Wabash county, 7 copies; Johnson county, 10 copies; Allen county, 49 copies; Madison county, 20 copies; Brainard, (Pulaski, Cass and Fulton counties,) 21 copies; Fountain county, 20 copies, and Jay county, 12 copies. No other Societies have been reported as tributary to this Society, nor have the names of members and their post office addresses been furnished.

We regret to report that an error occurred in the table of cases of Tracheotomy in Diphtheria, on page 126 of the Transanctions for 1867, whereby R. E. Haughton is credited improperly with five operations, through a mistake of the proof reader. The entire line should have been omitted.

L. D. WATERMAN, *Chairman.*

The Secretary read the following resolution, sent by the Rush County Medical Society:

Resolved, That the Rush County Medical Society protests against the system of double taxation required by the terms of the Constitution of the State Society, and that this Society withholds becoming auxiliary to the State Society until the organic law shall be changed so as to be express on this point.

Dr. Fields stated that he was authorized to say that the members of the Clarke County Medical Society desired to be placed in the same category with the Rush County Society. They objected seriously to being taxed for the support of both Associations, and had deputed him to bring the matter before the Society.

Dr. J. H. Woodburn moved to take the subject up immediately, which was agreed to.

Dr. John Moffett:

This Society seems to be composed of two classes of members—the permanent and delegated. This latter class become permanent members after having served as delegates from an Auxiliary Society. By the third section of Article XI, the Society has power to raise money by imposing a tax on the Auxiliary Societies and its own members of

Digitized by Google

not more than three dollars annually upon each member. But the permanent members of this Society are also members of their respective County Societies, and are not only taxed for the support of the State Society, as permanent members, but also as members of an Auxiliary Society. It is with a view to escape this double taxation that the letter is presented.

Dr. R. E. Haughton:

The County Societies, which, by the Constitution, we are allowed to tax, are represented here by their members. These members pay into the County Society their assessment for the support of the State Society. Are they to be taxed, also, as members of the State Society? If so, I regard it as unjust, and the Constitution should be so changed as to do justice to all.

Dr. L. D. Waterman:

As Secretary, I instructed the Secretaries of tributary Societies that the assessment would be required only from those members of their Societies who had not previously paid the same to the Secretary of the State Society.

Dr. J. F. Hibberd:

In some counties the assessment of two dollars on members who had paid their assessment as members of the State Society, met with such disfavor that many had determined, rather than continue thus to be doubly taxed, to withdraw entirely from the State Society. The trouble arising from this state of affairs materially shortened the list of members of the State Society last year, and if the matter is allowed to remain in this condition, the disaffection will grow, and the State membership will dwindle into insignificant proportions. It was the custom, in the early history of the Society, for the members present to make up among themselves a sufficient amount to defray the expenses. The Finance Committee would make an estimate of the amount required, and assess the members present. Last year a tax was levied on the Auxiliary Societies, in addition to the tax assessed on those who were present at the annual meeting, and in this manner the local Societies have lost members. Is it best to exercise the authority granted by the Constitution to tax members who come here, and not those who stay at home? The one who comes here

Digitized by Google

certainly entails upon himself an expense far in excess of the tax levied on the members of the Auxiliary Societies. He who comes to a meeting of the State Society gives his time to the work of advancing the credit and honor of the profession, and entails upon himself an expense in so doing. Is he to be taxed as a permanent member, and also a member of an Auxiliary Society? If so, a diminished list of members of the County Societies may be the result.

Dr. V. Kersey:

Protested against double taxation, and hoped the Society would take some action toward setting the matter at rest in future.

D. J. H. Woodburn:

Moved that the third section of the XIth Article, relating to the power to assess taxes, which reads, "It shall have power to raise money of its members, and those of the Auxiliary Societies, by a tax which shall not exceed three dollars annually upon each member," be so amended as to omit the words, "and those of the Auxiliary Societies."

Dr. W. F. Harvey:

Thought there was was too much machinery about the organization for successful and harmonious working. He came to discuss and hear others discuss medical subjects. He thought too much time being expended on trivial matters, and therefore moved to lay the subject on the table; which was carried.

He moved the appointment of a committee of three to take the whole subject under advisement, and report soon.

Dr. W. Lomax:

It looks to me from the complexion of things that we are only courting entanglements on a question about which the Constitution is clear and pointed. Members seem to be taxing their ingenuity to make things more complex. This Society is but a delegated body, made up of representatives of the profession as organized into County Societies, and not an independent body. The permanent members should remain such as long as they continued to pay up their assessments. If there is anything like double taxation I don't know how it is done. Every man may be taxed three dollars, those who come as

Digitized by Google

well as those who stay at home. There is certainly no double taxation. The expenses are paid by the members of the profession—the State Society is nothing but an organization of Delegates. I think the Constitution clear and decided.

Dr. Kersey asked what the point was that it was intended the Committee should settle.

Dr. Moffett:

The question is this: If a permanent member of the State Society comes here and pays his assessment of $2.00, when he returns home is he required to pay another assessment of $2.00 as a member of his County Society? Rush county will have no representation here until that matter is settled.

The vote was taken on the appointment of the Committee, and it was carried.

The Chair appointed Drs. T. B. Harvey, Wm. Lomax and J. H. Woodburn the Committee.

Dr. Wishard presented the following resolution:

WHEREAS, The State of Indiana has no general Hospital in which the unfortunate and indigent poor of the State can receive medical and surgical treatment;

Resolved, That the President of this Society appoint a Committee of one from each Congressional District to memorialize the next General Assembly to make an appropriation sufficient to establish and support a Hospital for the treatment of such indigent persons.

On motion, the resolution was made the special order for 10 o'clock to-morrow.

Dr. W. F. Harvey:

In speaking of the propriety of instructing the Committee just appointed, asked whether or not by the Constitution a member of an Auxiliary Society, coming here as a delegate, was to be considered ever after a permanent member.

Digitized by Google

Dr. W. R. Winton:

Members sent from County Societies as delegates remain members of the State Society one year, or until their successors are appointed, and no longer.

Dr. W. J. Elstun:

Last year there was presented at the annual meeting the following addition to the 3d Article of the Constitution, which, if passed, I think will settle the whole matter under discussion:

"All delegates or representatives, having served one year as such, shall be thereafter permanent members."

I move that this amendment be now adopted. Carried.

Dr. Elstun moved also the adoption of the following, which was carried unanimously:

All delegates heretofore appointed, who are present at this annual meeting of the Society, are hereby declared permanent members.

The Committee on revising the Constitution presented the following report:

We, the Committee appointed to revise the Constitution and By-Laws, would respectfully report the following recommendation:

That there be no change made in the Constitution and By-Laws at present, and recommend further that there be no tax levied by this Society on any Auxiliary Society.

On motion of Dr. W. Lomax, the report was laid on the table, the subject belonging properly to the Finance Committee.

The Committee on Finance made the following report, which was adopted:

The Committee on Finance have examined the reports of the Treasurer and Secretary for the year 1867, and find them correct.

The Committee recommend an assessment of two dollars on all the permanent members of the Society.

D. H. Oliver, *Chairman.*

Dr. J. F. Hibberd read his report on the Pathology of Diphtheria.

Digitized by Google

Dr. V. Kersey moved to refer the paper to the committee on publication. Carried.

On motion, the Society adjourned to meet at 8 o'clock, P. M. to hear the President's address.

EVENING SESSION.

8 o'clock, P. M.

Convention met pursuant to adjournment, Dr. John Moffett in the chair.

The President, Dr. J. S. Bobbs, delivered the Annual Address, which was referred to the Committee on Publication, with instructions to print it.

The Society adjourned to meet to-morrow morning at 8 o'clock, A. M.

Digitized by Google

SECOND DAY.

WEDNESDAY, May 20.

Convention met. Dr. J. S. Bobbs in the chair.

The minutes were called for and read.

Dr. J. F. Hibberd claimed that as the law now stands, the Finance Committee would have to tax local and permanent members, whereas the report of the Finance Committee was to the effect that local members should not be taxed.

Dr. L. D. Waterman presented the following resolution, which was adopted unanimously:

Resolved, That only such members of auxiliary societies as pay their annual assessment of two dollars shall be furnished with the Transactions of the Society for the ensuing year.

Carried.

Dr. J. H. Woodburn asked for the reading of Dr. Kersey's paper on Cholagogues, which was read by Dr. D. Clark, at Dr. Kersey's request.

The paper was referred to the Committee on Publication with instructions to publish it.

Digitized by Google

Some members of the Committee on Ethics being absent their places were filled by the President, when the committee stood as follows:

Drs. W. C. Thompson, J. Pennington, R. A. Curran, J. M. Boyd. and N. Field.

The hour of 10 o'clock having arrived, the President announced that the resolution offered yesterday by Dr. Wishard was next in the order of business.

Dr. Wm. H. Wishard:

My object in bringing this subject before the convention is not only to ameliorate the sufferings of the unfortunate and indigent poor, but to save to the profession many cases of surpassing value. I know of a number of surgical cases which, on account of the want of facilities furnished for treating them at the county poor houses, have failed of cure and been lost to the world and to the profession. There are many physicians who know how totally inadequate are the appliances and comforts afforded at the County Asylums. If the many cases that have fallen under my own observation—cases that with proper treatment might have been cured—had been brought to a hospital, the facts elicited would have furnished the most valuable material for our Medical Journal, and the success attending the treatment would have redounded to the glory of the profession. We now have no general hospital for the State. Other States have such institutions, and I think it time that we were having one. We need some place for giving attention to cases requiring the most scientific practice in surgery. I have now in mind a surgical case of great importance. The person had no means, and was taken to the county asylum. There no appliances are furnished the physician for giving proper attention to the case, the consequence of which will be that a cure can not be effected. Besides, the cases, under proper treatment, would have furnished valuable data to the profession, and would doubtless have been cured. It is with these views that I introduce the resolution.

Dr. J. F. Hibberd:

As this matter now stands, I can not vote for the resolution. The gentleman brings forward no plan. We have no means of knowing whether the object sought is practicable. If the resolution contem-

Digitized by Google

plated referring the subject to a committee, with instructions to report at the next annual meeting, I might think of supporting it. Before we can go before the Legislature with any assurance of success, we should first have matured a feasible plan to present. I am unwilling to invest a committee with authority to go before the Legislature in a matter of this kind, without knowing something of the plan of the institution proposed.

Dr. W. H. Wishard:

Why not discuss the matter now and devise a plan at once? The necessities of the case demand it. We want whatever is to be done in the matter done at once.

Dr. Geo. Sutton:

I don't think there is any use of passing on this question at all. Each township engages its physician who, if he chooses, calls in assistance, and in operations of any importance the very best medical skill to be had is at hand. I think by the present law the counties are doing all that could be asked.

Dr. W. Wands:

Stated his experience to be, that many counties were illy provided for taking care of the unfortunate indigent, and favored the resolution introduced.

Dr. J. F. Hibberd:

If the gentleman had brought forward some proposition we would have known what to do, but as it is we have no plan and cannot debate the matter intelligently. Where is this hospital to be located? This is only one of a score of important questions.

Dr. V. Kersey:

Stated his position to be, that there ought to be one good hospital centrally located. The subject was one of great importance to the State and to the profession. He favored the adopting of measures that would secure the early presentation of a plan well matured, upon which the Society might with some hope of success approach the Legislature. As the voting down of the proposition might admit of damaging misconstruction he hoped for its success.

Digitized by Google

Dr. J. Jones favored the passage of the resolution.

Dr. W. Lomax:

Would it not be a good plan to appoint a committee to devise a plan of action and submit the same to the auxiliary societies?

Dr. W. H. Wishard:

Disclaimed any preference for one plan or the other. He thought Dr. Bobbs could appoint a committee of one from each Congressional District that would act in the matter in a manner that could not fail to meet with the approval of the Society.

Dr. J. H. Woodburn:

Objected to the whole matter. He thought the good contemplated might be effected by the local societies, each for their respective districts, as in this place, in Richmond, in Evansville and other places. Patients dangerously ill could not be moved at any rate to a general hospital for treatment, if they happened to be any great distance off. It would be unsafe, and therefore he thought the scheme an impracticable one.

Dr. W. F. Harvey:

Thought we should consider what arguments we could bring to bear to influence the Legislature in the granting of such a prayer. He proceeded to state such as he thought were some of the arguments in favor, and what would operate to counteract them. He thought as to surgical cases accumulating at such a hospital it was not at all likely. The individual pride of a physician would be opposed to the yielding of an important case to the hands of others. As to appliances for treating surgical cases, nearly every physician was supplied with the necessary instruments.

Dr. R. E. Haughton:

I don't know whether there is any thing behind this resolution or not. I think a State hospital would not prove of such utility either to the sufferers or to the profession as some claimed it would. Provision of the character sought in the resolution should be a matter of local

Digitized by Google

pride. If it is sought by this move to assist in the sustaining of a medical journal, or to form a nucleus for a medical school, such facts should be stated, and they would go far towards influencing the Legislature favorably. As the matter stands I think the thing impracticable.

Dr. W. H. Wishard:

As to whether or not there is anything behind this I will state that there is. There is humanity behind it, and nothing else. I think it is an object which if successful will work great credit to the State. As to providing in the cases I have mentioned in the counties where such occur, I have witnessed so much suffering resulting from the penuriousness of county commissioners, that I look for nothing hopeful from such quarters. I brought the matter up here, because I thought the object a good one, and I know of no better place to set the ball rolling than right here. If the Society thinks it right to vote the matter down and take no action at all, let it take the responsibility. I regard a State Hospital as important as a State Lunatic Asylum, or Blind Asylum. I think it would be creditable to the State to have such an institution, which would also operate as a nucleus for a medical school.

Dr. V. Kersey moved the following amendment to the resolution:

"And that said committee be instructed to report at the next annual meeting of the Society."

Carried.

The original resolution, as amended, was taken up and passed unanimously.

The Secretary read a letter from the State Librarian, inviting the members to visit the State Library.

Dr. Geo. Sutton read a paper on Cholera, which, after discussion, was referred to the Committee on Publication.

Dr. Lomax read an abstract of his report on Surgery. Among the papers he presented as connected with his report, he mentioned a paper from Dr. J. S. Bobbs on Lithotomy of the Gall Bladder, which the convention requested Dr. Bobbs to read; which request was complied with.

Digitized by Google

On motion, the entire report was referred to the Committee on Publication.

Dr. R. A. Curran presented a report from the Committee on Ethics.

Remarks were made by Drs. James F. Hibberd, Theophilus Parvin, J. H. Woodburn, R. N. Todd, W. C. Thompson, Wm. Lomax, H. P. Ayres, Joel Pennington, L. D. Waterman, V. Kersey, R. A. Curran, T. B. Harvey, N. Field, and J. M. Gaston.

The report was referred again to the Committee on Ethics, who returned the report as originally made, except that the clause relating to the Western Journal of Medicine was stricken out.

On motion of Dr. J. H. Woodburn, the report and the entire subject was referred to the Committee on Ethics for the ensuing year, with instructions to report at the next annual meeting.

The Society adjourned until 2 o'clock, P. M.

AFTERNOON SESSION.

2 O'CLOCK, P. M.

Convention met pursuant to adjournment.

Dr. Moffett took the chair, while Dr. Bobbs proceeded to read the following report of the Committee on Prize Essay:

REPORT OF THE COMMITTEE ON PRIZE ESSAY.

The committee to whom was referred the subject of a Prize Essay on the Causes, Nature and Treatment of Cerebro-Spinal Meningitis, report that they have received two essays competing for the prize.

Digitized by Google

The committee have to regret the absence of one member, who, however, has communicated his views in writing. Your committee have given the subject all the deliberation their opportunities will allow. Both essays exhibit research and ability on the part of the authors, but in the opinion of the committee the preference should be awarded to that bearing the motto "*Valeat quantum valere potest.*"

J. S. BOBBS.
A. G. PRESTON.

On motion, the Report of the Committee on Prize Essay was adopted; and on breaking the sealed envelope accompanying it, the President announced the name of the successful essayist to be J. R. Weist, M. D., of Richmond.

On motion, the Prize Essay of Dr. J. R. Weist was referred to the Committee on Publication, and an order on the Treasurer for $100, was issued by the President to the essayist.

The President reported the following as the Committee on Ethics for the ensuing year:

COMMITTEE ON ETHICS.—Jas. F. Hibberd, Geo. Sutton, W. B. Lyon, A. M. Vickrey, G. W. Mears.

The President reported the following committees:

COMMITTEE ON NOMINATIONS.—Wm. Lomax, John Moffett, J. H. Woodburn, Geo. Sutton, J. M. Boyd.

COMMITTEE OF ARRANGEMENTS.—J. K. Bigelow, W. J. Elstun, W. B. Wands, J. P. Avery, Chas. L. Garner.

COMMITTEE ON FINANCE.—T. B. Harvey, Robt. Winton, R. A. Curran, M. H. Bonnel, H. F. Barnes.

COMMITTEE ON CREDENTIALS.—R. E. Haughton, F. S. Newcomer, F. J. Vanvorhis, N. Fields, Lewis Williams.

COMMITTEE ON PUBLICATION.—G. V. Woolen, W. B. Lyon, L. D. Waterman, W. J. Elstun, Chas. E. Wright.

COMMITTEE ON MEMORIAL TO LEGISLATURE FOR GENERAL HOSPITAL.—First Congressional District, Dr. De Bruler. Second District, Dr. N. Fields. Third District, Geo. Sutton. Fourth District, V. Kersey. Fifth District, W. H. Wishard. Sixth District, W.

Digitized by Google

R. Winton. Seventh District, T. B. Cox. Eighth District, Wm. Lomax. Ninth District, S. V. Jump. Tenth District, R. Winton. Eleventh District, C. N. Blount. J. S. Bobbs, Chairman.

COMMITTEE ON PRIZE ESSAY.—Vierling Kersey, Richmond, Wm. Lomax, Marion, J. A. Commingor, Indianapolis.

Dr. Parvin read his report on the Diseases of Females, which was referred to the Committee on Publication.

Dr. G. W. Mears read a report on Obstetrics, which was referred to the Committee on Publication.

Dr. H. P. Ayres read a paper on Indiana's Idiotic Children, which was referred to the Committee on Publication.

The Committee on Nominations reported the following names for officers for the ensuing year:

FOR PRESIDENT—Nathaniel Field, M. D.
FOR VICE PRESIDENT—R. N. Todd, M. D.
FOR SECRETARY—L. D. Waterman, M. D.
FOR ASST. SECRETARY—G. V. Woolen, M. D.
FOR TREASURER—W. B. Lyons, M. D.
FOR LIBRARIAN—Wm. Wands, M. D.

Dr. L. D. Waterman asked to be excused from serving another year as Secretary. He had served already two terms, and felt that he had done his part.

The declination was accepted and, on motion, the name of Dr. G. V. Woolen was substituted for Dr. L. D. Waterman, and that of Dr. W. J. Elstun substituted as Assistant Secretary.

The following were then elected as officers for the ensuing year:

PRESIDENT.

N. FIELD, M. D., Jeffersonville.

VICE PRESIDENT.

R. N. TODD, M. D., Indianapolis.

SECRETARY.

G. V. WOOLEN, M. D., Indianapolis.

Digitized by Google

ASSISTANT SECRETARY.

W. J. ELSTUN, M. D., Indianapolis.

TREASURER.

W. B. LYONS, M. D., Huntington.

LIBRARIAN.

WM. WANDS, M. D., Indianapolis.

On motion of Dr. Hibberd the Committee of Arrangements and the Secretaries were instructed to prepare an order of business.

Dr. Todd:

I was deputed by the Indianapolis Academy of Medicine to bring to the attention of the State Medical Society, the necessity of securing the passage of a law requiring the registering of marriages, births and deaths. It is a thing much needed. Other states are passing such laws, and it is time we had one in Indiana. I know that attempts in this direction have failed, but that fact will not deter me from making another and another attempt if necessary. The propriety of such a law is unquestionable. It will come sooner or later, the sooner the better. I move that a committee be appointed and instructed to memorialize the Legislature in favor of the passage of such a law. Carried.

Dr. W. Lomax:

Had been informed that a registration law was before the Legislature at its last session, but was laid on the table until the next meeting of the Legislature.

The President announced the following Committee on Registration:

COMMITTEE ON REGISTRATION.—W. C. Thompson, H. P. Ayres, Wm. Lomax, J. F. Hibberd, A. G. Preston.

Dr. N. Field read his paper on Cholera, which was referred to the Committee on Publication.

Dr. Moffet moved that the Secretary be authorized to issue certificates as delegates to all members who desire to attend the next meeting of the American Medical Association. Carried.

Digitized by Google

On motion of Dr. Wm. Lomax, certificates were ordered to be issued to Drs. Woodburn, W. B. Lyon and M. H. Bonnel, to attend said convention as delegates.

Dr. Lockhart presented a copy of a law lately passed by the Ohio Legislature, regulating the practice of medicine and surgery, and advocated the appointing of a committee to bring the subject before the Legislature of Indiana.

Dr. Moffett:

I am opposed to it. The difficulty of the profession is not that empirics are permitted to practice, but that we permit too many to enlist under our banner that are unqualified for the work of advancing or practicing the medical science—men who are neither physicians nor students. Let every man in the profession give himself to the cause of science and humanity, and the profession cannot suffer from the inroads of empirics. Fortify ourselves with a thorough knowledge of the science we profess, and the charlatan and mountebank cannot subsist by the practice of quackery. They can't win from us the confidence of the community, and the profession will have nothing to fear. We are not the keepers of society. Our duty is a plain one, to study and acquire a thorough knowledge of the science we profess. If then the community permits empirics to practice, our skirts are clear. We should purify ourselves first, and then attend to empirics.

Dr. R. N. Todd:

It is very well to talk of our own attainments, and laud the profession. The educated portion of society need not to be instructed on this point. That portion of community will support us, but there is another, by far the largest portion of community, upon which the cunning mountebank may prey. As a matter of humanity it becomes us to secure legislation for their protection. In France, and all over the Old World, the legitimate science of medicine is advanced by supporting and fostering the profession. So it should be here. We set up a high standard by which the community may judge us, and we should demand that all men who practice medicine should be judged by some just standard.

Digitized by Google

Dr. Lockhart:

The question is not whether or not the gentlemen of the medical profession can take care of themselves: it is, can the community imperfectly acquainted as it is with the science of medicine, upon the proper knowledge and application of which so much depends, protect itself. It is not for the benefit of the medical profession that I would have empiricism estopped, but for the protection of the community.

Dr. J. S. Bobbs:

It is a duty devolving on the profession to present to the Legislature its views on this subject and on others, and submit what, in the judgment of the profession, is required by the law of right and justice. The profession, by virtue of its learning, its intelligence and its usefulness, has a right to demand of the Legislature proper protection for the community, and a due consideration of its own important interests. Should it be tauntingly said, "The public has not asked you to sue for protection nor made you its guardians," demand it as a thing due to the profession. We are too modest towards ourselves, we have been neglected in these halls, time and time again, when we were asking only those rights vouchsafed the profession by other states. We do wrong in voting to return to these halls the men who spurned our petitions and cast us out.

Dr. Woodburn moved to lay the subject on the table. Carried.

The Committee on Prize Essay reported as follows, which was adopted:

On account of the condition of the Treasury, your committee think it better not to offer a prize this year.

Dr. G. W. Mears moved that the Convention return a vote of thanks to Dr. J. S. Bobbs, who had discharged so kindly and impartially the duties devolving upon him as Chairman. Carried.

Dr. Bobbs replied:

I am sincerely grateful for this mark of approbation. I have endeavored in my administration to act fairly and impartially. I am

Digitized by Google

glad to say that at this meeting of the Society we have had a more general representation than ever before. We may have had on other occasions a larger number present, but I believe we never had as large a territory represented as we have had on this occasion. I sincerely hope that this meeting, and such meetings to occur hereafter, may tend to advance the interests of the profession, encouraging a dignified manhood that earns and commands a high position in society. It should cringingly ask for nothing, ask no gratuities, but aim to hold that place in which it may with propriety demand its rights and accept nothing less. I shall be happy at all times to meet you here, not only in convention but in a social relation. Thanking you again for your vote of approbation, and hoping for opportunities to cultivate your friendship, I bid you adieu.

On motion, the Society adjourned to meet at Indianapolis on the third Tuesday of May, 1869.

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

Stevens

CATALOGUED
APR 20 1905
E. H. B.

TRANSACTIONS

OF THE

INDIANA STATE MEDICAL SOCIETY

AT ITS

NINETEENTH ANNUAL SESSION,

HELD AT

INDIANAPOLIS, MAY 19 AND 20, 1869.

BOSTON MEDICAL
APR 20 1905
LIBRARY.

PUBLISHED FOR THE SOCIETY.

INDIANAPOLIS:
INDIANAPOLIS PRINTING AND PUBLISHING HOUSE.
1869.

Digitized by Google

Digitized by Google

TRANSACTIONS

OF THE

INDIANA STATE MEDICAL SOCIETY

AT ITS

NINETEENTH ANNUAL SESSION,

HELD AT

INDIANAPOLIS, MAY 19 AND 20, 1869.

PUBLISHED FOR THE SOCIETY.

INDIANAPOLIS:
INDIANAPOLIS PRINTING AND PUBLISHING HOUSE.
1869.

Digitized by Google

ON MEDIC
DEC 18
LIBRARY

DEC 18 1918

Digitized by Google

OFFICERS.

PRESIDENT.

GEORGE SUTTON, M. D., Aurora.

VICE PRESIDENT.

H. P. AYRES, M. D., Fort Wayne.

SECRETARY.

G. V. WOOLEN, M. D., Indianapolis.

ASSISTANT SECRETARY.

W. J. ELSTUN, M. D., Indianapolis.

TREASURER.

W. B. LYONS, M. D., Huntington.

LIBRARIAN.

H. F. BARNES, M. D., Indianapolis.

Digitized by Google

Digitized by Google

CONTENTS.

PAGE.

I. Address of the President—N. Field, M. D., Jeffersonville.. 1
II. Why Doctors Disagree—V. Kersey, M. D., Richmond..... 10
III. General Anasarca—J. Moffett, M. D., Rushville..... 15
IV. Digestive Assimilation of Medicines—W. J. Elstun, M. D., Indianapolis..... 26
V. Case of Dislocation of Femur—M. Sexton, M. D., Rushville. 31
VI. Discussion on Puerperal Convulsions..... 39
VII. Transactions of Nineteenth Annual Meeting..... 47

Digitized by Google

Digitized by Google

ON MEDIC
DEC 18 1919
LIBRARY

PRESIDENT'S ADDRESS.

THE TROUBLES AND RESPONSIBILITIES OF THE MEDICAL PROFESSION.

BY N. FIELD, M. D., JEFFERSONVILLE, IND.

It is an oracle of Revelation, more ancient than the Law of Moses, that the days of man are few and full of trouble. And if there were no such Divine revelation, the experience of mankind in all ages abundantly proves the truth of the declaration. It is acknowledged on all hands to be the common and unavoidable destiny of all men, modified, however, to some extent by the different avocations in which they are engaged. The farmer, the mechanic, the merchant, the lawyer, and the common laborer, have troubles peculiar to their pursuits, while each one complains that he has more than his share, and that his burden is at times too heavy to be borne.

But of all the trades, employments, and professions, there is no one so fraught with trouble and responsibility as that of the healing art. It is truly one of labor and sorrow; and what is singular, there is no man who gets less sympathy from his fellow-men, than the faithful and conscientious physician. Nobody cares how much he suffers mentally or physically in the prosecution of his arduous and responsible mission of mercy. When I say mission of mercy, I assert for the Medical Profession its just claims to a high position among the benevolent institutions of civilization; for it is a demonstrable fact that it originated in pity and commiseration for human affliction. In the most remote ages of antiquity, the sick were laid in public places, that they might be seen by every passer-by, and get the benefit of what he might know of the disease and the best remedy for it. Remedies and prescriptions in those times were gratuitous—prompted by compassion for the afflicted. In the lapse of time it was thought best for certain men to devote themselves exclusively to the study of

Digitized by Google

diseases and the care of the sick. The meager experience of the people with the use of medicines, and their mode of administration, constituted the stock of knowledge of the first regular practitioners of the healing art. Like the ministers of religion, whose whole time was given to the service of the altar, and who had to be supported by those who enjoyed the benefit of his ministrations, the physician of ancient days, who generously consecrated his life to the philanthropic work of ministering to human suffering, had of necessity to subsist by his business. In neither case does the fact of compensation for the services rendered, detract from the benevolent character of the profession. The Apostles were assured of a support while proclaiming the Gospel of life and salvation to a dying world. No one who believes the Christian Religion doubts the benevolence of *their* mission, and yet it is an established principle of that religion, that they that preach the Gospel shall live of the Gospel. The Medical Profession has been abused and dishonored by corrupt men; so has the Gospel. Bad men have crept into the ministry for worldly purposes, and have prostituted and degraded the sacred profession for unworthy objects. In like manner knaves and impostors, taking advantage of the ignorance and credulity of mankind, have amassed splendid fortunes by cheating them with secret nostrums, as worthless as their inventors are shameless.

Let it not be said, then, that the profession of Medicine is a mere trade, invented by mercenary men for the sake of a livelihood. As the misfortunes of the human family necessitated the Gospel, so their diseases necessitated the practice of medicine. One is addressed to the moral, the other to the physical condition of men. Both alike are indispensible to the spiritual and corporeal welfare of humanity. To this day the medical profession is regarded as under special obligation from immemorial usage to be charitable. Regardless of self-interest, and without the hope of remuneration, public opinion compels the physician to give his time and attention to the poor. He cannot avoid the perpetual tax upon him if he would. A refusal to labor without a positive and satisfactory assurance of reward, would subject him, though unjustly, to the censure and denunciation of his neighbors. He would be viewed as a heartless and unfeeling man.

With this introduction to the subject, let us proceed to notice in detail the troubles and responsibilities of the doctor of medicine. And where shall we begin, seeing they are legion? No tongue can relate nor pen adequately describe them. They must be experienced to be understood and appreciated.

1. There is no limit to the labor of the physician, who has a solid reputation and an established practice. His day's work is never done. He cannot work on the eight or ten hour system. Twenty-four hours per day and seven days in the week, are required of the doctor as a consideration for the pleasure of doing good and being poorly and grudgingly paid for it. All other men

Digitized by Google

have their regular hours for rest and recreation, but not so with the physician. He has no time which he can call his own. He cannot, like the farmer or mechanic, retire to rest in the assurance that his repose will not be interrupted. Night and day are one and the same to him. The quiet and refreshing sleep, so grateful to the husbandman or the mechanic, is seldom enjoyed by the assiduous and care-worn physician. Oftentimes he retires to rest, after an arduous day's labor, in the hope that he will not be disturbed during the night; but ere he has had time to adjust his weary limbs upon his couch, the sound of the night-bell, or the loud and hurried raps upon the door, startle him like an electric shock, and compel him to arise and listen to that same old message from somebody taken violently sick, or some patient having grown much worse, requesting his immediate attention. In vain he files his reasons and excuses for not wishing to comply with the request. He may plead inability, fatigue, or exhaustion, but all to no purpose. The messenger is instructed to take no denial, but bring the doctor without delay. Go he must, through darkness, storm or rain, pay or no pay, or be importuned and annoyed for the balance of the night. If he complain or hesitate, he is reminded of his implied obligation when he offered his services to the public—to go when sent for. He is thus given to understand that he is not his own, but the slave of the public, bound hand and foot to the imperative duty of consulting the comfort and caprice of his employers. It is easier to amputate a score of limbs than to disabuse the minds of the people of the erroneous ideas entertained of the rights of the medical profession. In their judgment the doctor has but one reserved right, and that is to go when he is sent for, regardless of pecuniary considerations. To obey all orders without conditions or limitations, is his first duty; and to be omnipresent to receive the orders the next.

2. There is no class of men called on to make the sacrifices and practice the self-denial of physicians. They alone seem to be, by common consent, a public convenience to be always ready for an emergency. All other men have time for relaxation from business, and can take pleasure and recreation. But not so with the reputable physician. He is too much encumbered with serving to indulge in such a luxury. He is never at leisure, but forever has his hands full of life and death. Should he leave his patients in the care of a substitute for the purpose of rest and mental recuperation, he returns to find them transformed into impatients, breathing out threatenings and slaughter against him for absenting himself. If one should happen to die in his absence it will be charged to his neglect. It is thus that the pleasure of a physician during a brief intermission in the monotonous duties of his profession, are marred by apprehensions of trouble. His thoughts are on his patients, whose mutterings and complainings haunt his imagination and destroy his enjoyment. Of all men he is the most confined and enslaved. If he had all the wealth of Crœsus it would avail him nothing, as he has no time to

Digitized by Google

enjoy it. He never feels entirely at ease. Anxiety about his patients and the result of his medications prey upon his mind. Even in the house of God, and in the midst of his devotions, the message comes of some one alarmingly ill, who wants him instanter. With a heavy heart he repairs to the scene of trouble, to spend perhaps the remainder of the day in listening to the cry of distress.

No amount of fatigue or exhaustion will ever excuse the physician, with some people. If he can stand on his feet he is adjudged amply able to make a visit, or do any other service required of him. Go, therefore, he must, at the risk of dying by the wayside. And while the doctor is the victim of all this imposition and unreasonable exactions, as a general thing no regard is paid to his comfort. He is but seldom invited to lie down and rest, as the patient is generally too selfish to pretermit his attentions. He must fare as best he can. So the patient gets relief, it makes no difference about the doctor. Like a fire engine, he can go at all times, and live without eating or sleeping.

For all this deprivation of personal ease, and for all this exposure of health and life, and for all this vexation and trouble, he often gets neither pay nor gratitude! The illiterate part of the community labor under the delusion that a physician is legally bound to obey every call made upon him, though the party making it may be notoriously insolvent and dishonest. It is this mistake that accounts for the occasional insolence of irresponsible patients and their friends, and the unblushing frauds practised upon the doctor. They want visits without the slightest regard to necessity or economy, as they never expect to pay for them; and when they are made, and their health restored, they abscond "to parts unknown," to tell how they were impoverished by exorbitant doctor's bills!

The physician who expects to get through the world on flowery beds of ease, will find, by the time he has completed his journey, that his pathway is strewn with thorns instead of flowers, much of which was trodden under dark skies.

3. It frequently happens that the physician is compelled to work indefatigably, without fee or reward to save his reputation. Cases will arise and be thrown upon his hands which impose on him grave responsibilities, without the slightest pecuniary benefits. After undertaking the treatment of a case, it will not do for him to neglect it, lest a fatal termination should damage his reputation. The public expect him to take as much interest in a charity case as in that of the most punctual customer. The jaundiced eye of the community can see no difference, morally or legally, in the claims of these patients to the services of the doctor.

4. Contending against the follies and prejudices of the ignorant, who expect medicine to do everything and nature nothing, is another and fruitful source of trouble to the physician. The masses of the people have an unbounded confidence in drugs. They fix a limit to disease, beyond which they do not want the doctor to let it continue.

Digitized by Google

It must be cured by the time set, or they will become restless and impatient, evidently distrusting the doctor's skill. If he can not come to time the probability is that he will be superseded, and that too without notice to quit. or the formalities of a consultation. Such a stupid procedure leads to trouble and embarrassment among medical men, engendering jealousies, suspicions and ill will, requiring years to correct. The world abounds with ignoramuses, who are wiser, in their estimation, than Solomon, and who know more about diseases than the doctor. They have no ideas whatever of the ethics of the medical profession, and no respect for its honor and respectability. They want a disease "stopped," and in their insane desire to have it done, they will run from one doctor to another, in the hope of finding one who will not let it "run on." They are so much afraid of dying that they will not give nature and the doctor time to subdue the disease.

5. The physician is expected to be infallible in diagnosis, treatment and prognosis. And not only so, he is expected to understand at a glance all about the idiosyscrasies of his patient. A mistake in any of these things will be mentioned to his discredit. It may, and often does, happen that without knowing some peculiarity of the patient's constitution, a good medicine, appropriate to the case, and in moderate doses, may prove injurious. In such an event, no reasoning or explanations will serve to avert the blow that will fall upon his medical reputation, provided in the end the patient dies. How much trouble and regret have been experienced by a well-meaning physician in consequence of the injurious and occasionally fatal effects of mercury! Who can express the mortification and humiliation of which he is the subject while doing his utmost to save a patient from mercurialization, resulting from a careful use of that once popular medicine. Who can comprehend the depth and extent of his mental perturbation in such a case? And so of other accidents that may occur in the practice of the most prudent and eminent physician. Liston once ligated a procident uterus, supposing it to be a polypus. The patient died from its effects, and a post mortem examination revealed the mistake! We can perhaps imagine his feelings when the discovery was made. Under such painful circumstances how acceptable are words of sympathy from professional friends! Neither learning nor experience are certain guarantees against errors in diagnosis, and therefore we should deal kindly with each other, and take no advantage of each other's mistakes or misfortunes.

But it may be said, to the reproach of the profession, that a contrary spirit too often controls our colleagues. They are either silent or indifferent to the wrongs which may be done an erring brother, or join in his defamation. Instead of holding up his hands, and encouraging him in his future efforts, they seize the opportunity to injure him. How unkind in the members of a noble profession! Let no high-minded and honorable physician ever exult at the acci-

Digitized by Google

dents or mistakes of his brethren; for he does not know how soon he may be involved in the same trouble. Death from chloroform, or from a surgical operation, or from some mistake in practice, may bring him to grief. "Let him that standeth take heed, lest he fall," is an apostolic injunction, intended for the Christian, it is true, but not inapplicable to the doctor. We are wonderfully and fearfully made; and it is not an easy matter to deal safely and successfully with the human constitution. It is like a harp of a thousand strings, requiring almost superhuman knowledge to play upon it. It is not, then, a matter of surprise that physicians are charged with killing about as many as they cure. Though the doctor may faithfully discharge his duty, and exhaust every resource of the profession in a fruitless effort to save life, and after all, in despite of his exertions, the disease terminates fatally. His treatment may have been in all respects faultless, still ignorance and presumption will coolly attribute the death of the patient to the doctor's medicine. Somebody must be blamed, and it generally falls to the lot of the doctor to be the scape-goat to bear away the sins of the family. Inattention to the case until it has assumed dangerous proportions, bad nursing, imperfect ventilation of the sick-room, and errors in diet, are all lost sight of, or placed to the account of the doctor. And not only so, the doctor himself is sometimes the subject of painful reflections. Notwithstanding every step in the treatment may have been maturely considered, and every remedy used may have been wisely selected, nevertheless, a lurking apprehension may rest upon his mind that there might have been some errors in the treatment. He imagines, perhaps, that it was too heroic, or perhaps not enough so. Some one medicine may have been used too freely, or parhaps more efficacious ones were omitted. All these, and indeed many other reflections, are the natural sequences of a fatal disease, not regarded as necessarily incurable.

6. Officious intermeddling with a physician's treatment of a disease is another cause of trouble and vexation. Old women and superstitious neighbors frequently know more than the doctor, and very generously offer their services to assist him; and without waiting for his consent, either prescribe for his patient or countermand his orders! The patient is told that he is too weak to take the doctor's strong medicine; and its use is suspended for some outward application, such as a cataplasm pain killer, or the everlasting and all-powerful "goose grease." These wiseacres know more than a regiment of doctors, and can relate many cases of the same kind cured by some wonderful patent medicine.

They sometimes anticipate the doctor's prescriptions by giving a dose of patent vegetable pills, believing that he would do the same thing, were he present, and acquainted with the condition of the patient. A few homœopathic globules are occasionally administered by a disinterested friend, by way of helping the doctor. This is not a moiety of the trouble of medical men from this source. They have

Digitized by Google

to contend with all sorts of quackery, ignorance and knavery, from the high-pressure steam practice of Thompsonism to the infinitesimal nonsense and humbuggery of Hahnemannism. In every house he meets patent nostrums that are generally tried before the doctor is sent for. Sometimes in the most critical stage of disease, when steadiness and perseverance in treatment are of vital importance to the patient, the attending physician finds himself unexpectedly supplanted and pushed aside by a steam doctor, or a botanic doctor, or a homœopathic doctor, or perhaps a faith doctor, either of whom could have done wonders, had he been called in at first. These charlatans and deceivers, with an air of matchless wisdom and self-complacency, at once comprehend the case, and regret exceedingly that they were not sooner sent for, as the patient, under their skillful medication, might have been well. As a matter of course all that had been done was wrong, and the patient is the worse of it. Serious fears are expressed that the strong medicine administered by the mineral doctor will never be dislodged from the patient's bones! But still the empiric is willing to do the best he can, and if he fail it will be because he was employed too late!

For all this insolence, presumption and scoundrelism, so trying to an honorable physician, there is neither remedy nor redress. His feelings are thus trifled with and insulted with impunity. A large outlay in preparatory education, and years of study, the expense of attending medical schools and graduating, amounting to nothing, in the estimation of a certain class of community (and they are a large class too), who believe more in Indian doctors, and amulets, and incantations, and charms, than in all the learning of the books. He is destined to be eclipsed by the intuitive knowledge of the "herb doctor," or the transcendental sublimities of homœopathy.

Thus it is that the meritorious physician is humiliated, annoyed and harrassed until he is oftentimes tempted to quit the profession in disgust. But, for the accommodation of a few appreciative friends, he submits to injustice, and resolutely perseveres in well-doing, but never to a compromise of self-respect for the sake of business.

7. Another cause of trouble with medical men is the difficulty of regulating professional intercourse. There is no question as to the obligation to observe towards each other a proper degree of respect, and to cultivate at all times mutual confidence and friendly relations. In order to prevent misunderstandings and ill will, arising from a real or fancied infraction of professional rights, a code of medical ethics has long been adopted by the regular practitioners of medicine, defining their rights and obligations. The observance of this code in letter and spirit is, by common consent, deemed indispensable to the maintenance of peace and friendship. With young members of the profession there is a greater degree of sensitiveness on this subject than with those who have grown grey in the profession. The former are naturally more jealous of each other, and hence more

Digitized by Google

exacting in their claims to be treated with the strictest professional courtesy. The slightest deviation from the straight and narrow way pointed out in the code of ethics, with some punctilious medical Chesterfields, is considered a sin unto death, for which there is neither repentance nor forgiveness. While we should insist on a compliance with the rules of order and good government, still some allowance must be made for unavoidable irregularities and informalities in the joint treatment of diseases. Consultations can not always be conducted in strict conformity to the code. Through inadvertance something may be said or done without any evil design, to which the attending physician may take exception. Misconception of each other's motives, in accidentally or ignorantly transcending the bounds of propriety, has caused jealousies, envyings and alienation, among physicians, derogatory to the dignity of the profession. All this may be obviated by a little frankness and forbearance, taking it for granted that wrongs will be corrected when discovered, and due reparation made.

Let it not be inferred from what has been said that I am a latitudinarian on the subject of ethics, and in favor of granting indulgences to professional sinners. By no means. But for a liberal construction of its rules, and a few grains of toleration for each other's delinquences, especially when nobody is hurt. Candor and confidence are the qualities essentially necessary in the relations and clinical intercourse of medical men, and if assiduously cherished will avert a world of trouble.

8. Another great trouble with medical men is the difficulty of obtaining an adequate compensation for their services. It is a singular fact that but few of them ever attain to affluence. An overwhelming majority die poor. This is not the case with men engaged in other branches of business. A very large per cent. of men devoted to commerce or the mechanical arts, with prudence and economy, either get rich or accumulate a competency in a few years. The amount of labor performed by some physicians, if directed in a different channel, would repay them an hundred fold. Many men of very moderate education and a still more moderate stock of intellect, by trading or speculating, or some other business, amass a fortune in a few years, without the loss of a night's sleep or incurring the least responsibility. It is manifest that the reason of this difference is, that the physician is not paid for his labor. He is cheated and defrauded out of a very large portion of his earnings. While his occupation is infinitely more important to the welfare of mankind than that of the tradesman or speculator, he is not any more respected, and not half as well paid. His business is done almost entirely on credit, and he has to depend mainly upon the honor of his debtors for his fees; and experience proves that it is very poor security. Physicians generally feel a strong repugnance to a resort to legal process for the collection of their bills. The very idea of having an execution levied upon the property of a delinquent is

Digitized by Google

repulsive to their feelings. Rather than appeal to the law for justice, and get the unenviable reputation of niggards and misers, they submit to wrong. Making all due allowance for charity patients, from whom of course they expect nothing, still, there is a large number who could pay if they would; but knowing themselves to be legally irresponsible, deliberately and intentionally withhold the doctor's hard-earned fees. Moreover these unprincipled ingrates, very often, after their accounts are defunct by the statute of limitations, again graciously tender the doctor a renewal of their patronage! Sometimes when he takes a look at his pile of worthless bills, he is almost constrained to exclaim, as the Psalmist did in his haste, "that all men are liars."

With a large practice to be barely able to live, is a severe tax on the patience of a physician. The return he receives for his days and nights of labor and responsibility is so scanty and unsatisfactory, as to compel him to abandon the profession. The fact is the masses of the people have been accustomed to look upon physicians somewhat in the light of pensioners, subsisting upon the afflictions and misfortunes of mankind, and, therefore, it is a matter of very little consequence whether they are paid or not.

But whilst the pecuniary reward of the honest and useful physician may be very poor, falling far short of his merits, still, he is rewarded to some extent in the conviction that he has been instrumental in doing good to many of his fellow-men who were really the proper objects of charity. He has relieved much suffering; and by his opportune presence snatched as it were many a sick person from the very jaws of death, thereby causing joy to the sad hearts of despairing friends. He feels that he has been the good Samaritan to the poor and the needy. He knows that he has lived to some purpose, and that thousands have reaped the benefit of his labors. At times when success in battling with disease and danger crowned his efforts, he has been applauded and praised as almost a ministering angel or a demi-god. He has often participated in the rejoicings of fathers, mothers, husbands and wives, delivered by his skill from impending bereavement. His tears of joy have often mingled with theirs at the bedside of convalescent relatives.

These happy incidents in his life are remembered with pride and pleasure, and console him in professional tribulation. They are bright spots, ever green and fadeless, in his eventful journey through this world of sorrow and death. Though clouds and darkness may often obscure his mental horizon, he nevertheless has many bright skies and comforting reflections. If his course has been upright and honorable, he will have the approval of his own conscience and the praise of all good men. And though he may end his labors of love, and go down to the grave to sleep with his fathers poor and penniless, he will leave behind him the legacy of a good name, and will be remembered with gratitude as a public benefactor.

Digitized by Google

WHY DOCTORS DISAGREE.

BY V. KERSEY, M. D., RICHMOND, IND.

It seems difficult for some to perceive the distinction there really is between scientific medicine and the numerous pretensions brought forward as improved methods of cure. A want of proper discrimination has left many laymen and some physicians disposed to believe that our rule of ethics prohibiting intercourse at the bedside with doctors of other so-called systems, is founded in arrogance, and works cruelty towards the sick. But an impartial view of the facts is sufficient to dissipate this impression altogether.

Rational scientific medicine comprises a thorough knowledge of anatomy, physiology, pathology, animal chemistry, etc., with all the signs and symptoms of both health and disease, that the physician may be able to recognize and appreciate every departure from the physiological state.

It further comprises a profound knowledge of the hygienic and remedial wealth of nature, organic and inorganic, mechanical and chemical, material and spiritual; every department of which is rich in sanitary resources, inviting research and application. Air, water, food, raiment, light, heat, motion, rest, sleep, culture of the entire man, with all other instrumentalities, including drugs, are the means by whose enlightened use the scientific physician proposes to prevent, mitigate, or cure "the thousand natural shocks that human flesh is heir to."

On this broad basis, with this boundless wealth of appliances, in the light of all collateral knowledge, without prejudice, mystery, or dogma, clinical experience deliberately builds up rational scientific medium—a structure properly so called, in contra-distinction to all other pretensions. It is true the work is not yet fully performed; but this sketch indicates its scope and purpose, and its destiny is as sure as the progress of knowledge.

Every other system of medicine is either partial, distorted, dogmatical, or unscientific; while some have all these faults and many more. Most of them are too insignificant to be named, and no one of them is likely to find a place in permanent history, except in illustration of the ignorance, the folly, or the absurdity of the time.

Digitized by Google

In this connection let us consider for a moment the fundamental principles of medicine as laid down by Hahnemann in his "Organon," bearing in mind that they take the place of scientific knowledge.

Each medicine cures a disease like that which it produces when administered to a person in perfect health. Its curative action is specific and unconditioned. Trituration and agitation increase the power of drugs to an unlimited extent, and must be cautiously employed or dangerous activity will be developed. Each medicine must be administered in infinitely small doses. For example, mix one drop of simple tincture of camphor, belladonna, sulphur, mercury, or the like, with a quantity of pure alcohol equal to countless millions of globes like the earth. Moisten a pellet of sugar the size of a pinhead with this solution and place it in a vial; bring the vial near to one nostril of the patient and permit him to make a single momentary inhalation. If this should fail to effect a perfect and permanent cure, the dose may be cautiously repeated by another inhalation in an hour, a week, a month, or three months, according to the nature of the case, and the impression produced by the medicine. This single pellet, with a single application of the moisture, will retain the full power, and produce the specific effect of the drug, though constantly used in this way for eighteen years at least.

Nervous debility, hysteria, hemicrania, hypochondriasis, insanity, melancholy, idiocy, madness, epilepsy, spasms of all kinds, softening of the bones, rickets, scoliosis, cyphosis, caries, cancer, fungus hæmatodes, pseudomorphia of all kinds, gravel, gout, hemorrhoids, jaundice, cyanosis, dropsy, amenorrhœa, gastrorrhagia, epistaxis, hæmaturia, metorrhagia, asthma, phthisis, impotency, sterility, deafness, cataract, amaurosis, paralysis, loss of sense, pains of every kind, etc., are constantly, fundamentally, and solely, modifications of *itch*.

These and kindred lunacies make up the sum of "*homœopathy*." They rest entirely on fancy and dogmatism, and are at war alike with common sense and correct observation. Practically the system amounts to absolute expectancy in every condition of disease. The most profound devotion to these absurd fancies affords no qualification for the scientific practice of the healing art. It rather indicates a visionary order of mind, a credulous disposition, and a want of sound judgment essentially unfit for a pursuit so difficult and responsible.

The opposite dogma, "*contraria contrariis curantur*," or "*allopathy*," with which homœopathists would stigmatize rational scientific medicine, considered as a rule to determine the means of cure, is, like *homœopathy*, a manifest absurdity. Its application has been recognized from the first, by every member of the profession who has given the subject a moment's thought, as an imbecile attempt at slander.

It would be an easy task, though irksome and unprofitable, to show that each of the other new methods of cure is partial, errone-

Digitized by Google

ous, and unscientific, and that the doctors themselves are wonderfully ignorant of anatomy, physiology, pathology, chemistry, and other essential elements of medical science.

In view of these facts it is sufficiently manifest that professional fellowhship cannot exist between scientific physicians and any other existing class of doctors; that the ethical rule in question grows out of the very nature of the case; is wise, humane and useful, subserving alike the interests of science, and the well being of the sick.

But will it be said that many of our members, graduates in scientific medicine, are grossly ignorant of the fundamental principles of the science, and by no means qualified to practice the profession with credit to themselves or with safety to the sick?

Admitting this to be true, it affords no reason for still further degradation of the standard of the profession, by fellowship with a vast herd of doctors, specially trained in prejudice, error and credulity, in place of rational science. Far better pursue an upward bearing, compelling incompetent and unworthy graduates and natural charlatans, foisted into nominal fellowship by mercenary teachers, to fall out of the ranks, where a high grade of positive merit should alone secure a permanent place.

DISCUSSION.

Dr. Moffett, of Rushville:

The practitioner of medicine is frequently asked the question: Why it is that he will not hold consultation with what are called irregular practitioners of medicine? The public mind on this question is not well informed. Members of the profession itself have not as just and clear views on this point as they should have. The doctrine taught in this paper I believe to be true. If I, or any other physician who can not believe, or repose confidence, or exercise faith in the dogma of infinitesimal doses being more efficacious in the correction of morbid action than those that are tangible, as a necessary consequence, upon consulting with a homœopathist we would disagree at that point. Even if we did agree as to the cause, nature and seat of the malady, the moment we come to present the means by which that malady might be cured or corrected there would be a disagreement. Now the public mind is not at all familiar with the distinctions that should be made; hence I believe just such a paper as this is appropriate. And it will have a good influence upon the minds of the profession, if they will take the hints, and carry them with them in their daily rounds. The only successful way, in my judgment, in which we can oppose irregular medicine is to enlighten the public mind on this question.

My impression is that the past history of regular medical men has been to keep concealed from the enlarged judgment of society the

Digitized by Google

nature of medical science, what it proposes to do, what it can do, and how it is to effect good in its results, on the sick and afflicted. You may, gentlemen, in all probability not very long since, in your intercourse with medical brothers, have heard it said that you must keep this thing down; that you can not effect any good if it is known what you are administering in a case. Now it is that very thing that the charlatan takes advantage of. He knows that the human mind is such that the concealment and secrecy that surrounds what he does with supernatural power, is the thing that gives him credence and influence, and by which he can maintain a hold upon the credulous long enough to get them to place themselves under his direction and his medical delusion. I know a wise discretion must be exercised in this thing. I know there are certain states or conditions of mind of your patients, when it is not your duty—when it is improper—for you to inform them specially of what you are doing; but in a large majority of cases you give your patients reasons why you are doing so and so, and that gives you a power that none but such as do, can exercise to advantage over his patient.

One of the essential principles of homœopathy is that each dilution gives an increased power to a given remedy, and after it has been diluted, four, five or six times, before administering it, that three or four additional shakes increases its efficiency still more.

The next principle is that a remedy that will cure a given malady, administered to an individual in health, will produce that malady.

These are the cardinal points of homœopathy. Now the question is, Have you as observers at the bedside observed anything connected with the effects of remedies that has caused you to believe there is any truth in that doctrine? For twenty years I have been observing this matter, and have not been able, with my feeble powers, to observe that there is any such thing in nature. We know that aconite, strychnine, and many other kindred medicines, from their nature must be introduced into the animal organization in minute particles. This subject is exercising a beneficial influence upon the medical profession; it is directing their minds, especially those devoted to the profession, to learn what is true in medical science, as taught from schools and inculcated by writers; and hence in many instances the medical profession see results from agencies that perhaps were passed by lightly heretofore.

These are my convictions after twenty years experience, and I think it proper that my friend Dr. Kersey, even at this late day, should undertake to show to the profession the reason why doctors disagree. It is an important question, for it is often quoted: "If doctors disagree who shall decide?" How can we expect a man with a single idea, that wants to take the short road to dollars and cents, to determine what is true in medical science, as compared with the man that studies the anatomy and the chemistry of the human organization, and claims from every source in the whole universe

Digitized by Google

anything that he can appropriate to his use in alleviating suffering humanity? I say, gentlemen, if that man is not capable there is no possibility of us deciding this question. Hence we must be patient, persevering, careful in observation, and never fail to learn from the least opportunity that may be offered us. That is the only way that we can arrive at skill and efficiency in the application of our art at the bedside.

Digitized by Google

GENERAL ANASARCA.

A CASE,—WITH REMARKS.

BY JOHN MOFFETT, M. D., RUSHVILLE, IND.

On the 22d of September a young man eighteen years of age presented himself at my office for medical examination. Occupation, a farmer, never having had much sickness; sanguine temperament; well developed, having rather a heavy muscle. A few days previous, when awaking from his night's slumbers, found some tumefaction of the integuments of the neck, otherwise could not detect anything wrong with his general health. This symptom every morning seemed to increase by extending to the surrounding parts. After looking into the case as well as I could, I came to the conclusion that there was perhaps a sudden suppression of the cutaneous transpiration, which had induced the effusion existing. I could not see further in the case at that time, accordingly I prescribed small portions of calomel and Pulv. Dover., to be taken three times a day as an alterative, with a view of correcting exhalation and stimulating the absorbent faculty. The appetite at this time was very good, the bowels regular, tongue natural, and sleep good, the nervous system unimpaired, no headache nor pain anywhere in the body. When four or five days had elapsed he reported himself, with little if any improvement. My judgment was that the disease had rather progressed, but the general functions of the body did not manifest much derangement—the renal secretion seemingly about normal in quantity and quality. We again renewed about the same course of medication, considerably increasing the size of the dose, so as to have a distinct effect upon the solubility of the contents of the bowels. From this, apparent improvement was the result, and the patient and the doctor were somewhat flattered that the unpleasant symptoms were passing away. At this period I permitted the patient out-door exercise, and he went to school some. At the end of a week all the phenomena became suddenly aggravated, without febrile features. Now the patient visited me with anasarca showing itself over nearly the entire surface, especially affecting the face and head so as to disfigure the countenance. The lower extremities were evidently swelling, for upon pressure pitting was effected. Each time the pa-

Digitized by Google

tient was seen it was my endeavor to ascertain, if possible, the real seat and nature of the complaint, as a foundation for a rational plan of treatment, but as frequently we were disappointed in the success of the inquiry. When looking after the cause I could find no mechanical obstructions to the free return of blood to the heart, influence of cold, excessive hemorrhages or other wasting disease; inactivity or disease of the kidneys; repelled cutaneous eruptions; suppressed habitual discharges, whose direct effect is to exhaust the system; arsenic, and some of the exanthemata, as scarlet fever and measles. None of these were to be found in the present or past history of the patient. Therefore, in the absence of better notions of the state of things under consideration, I placed the patient upon the use of Sub. Murias., three grains daily, with four grains of quinine to be given with the mercury. This prescription was continued two days, at which time the symptoms were greatly aggravated. For the first the circulation became involved. The pulse up to now had been unchanged from the normal standard.

This brings us to the 13th day of October. Dr. H. G. Sexton visited the patient with me. There was an increase of the effusion, involving the general surface; eyes nearly closed; fever; pulse 100, full, and not resisting; tongue red, inclining to dryness; secretions of the mouth adhesive; thirst, and general suffering complained of; urine scanty and high colored; bowels rather torpid, and the skin harsh and dry. A careful investigation being made by Dr. Sexton and myself of the condition of the patient, we agreed to put him upon the use of calomel and Tart. of Ant.; the Sub. Murias. in two grain doses, and enough of the antimony to effect moderate but constant nausea. In conjunction with these, creamor tartar water. This prescription was predicated upon the conclusion that the seat of the affection was located in the subcutaneous capillaries, resulting from a sudden suppression of the insensible perspiration; that the probable pathological state of these vessels was that of an extreme irritation or subinflammation, and hence this pouring out of their serous contents.

This is a succinct statement of the pathology entertained at the time. One of the most prominent reasons for so concluding, was the peculiar thickened state of the skin, with the retention of its elasticity; and a second reason was the absence of any circumstance affording a more satisfactory explanation. This plan was faithfully executed, and seemingly followed by encouraging effects for nearly a week. The febrile symptoms subsided, and the work of absorption appeared to be progressing favorably, so much so that the head and face were comparatively free from the unnatural accumulation. The Tart. Ant. acted freely upon the bowels instead of procuring nausea as was expected when it was prescribed; but its cathartic action did as well, for it was attended by copious liquid stools which had to be restrained by the suspension of the agent and the exhibition of mild anodynes. The urine remained normal in quantity and

Digitized by Google

less colored. If left standing in the vessel until cool, quite a copious sediment of a limestone color would appear.

As the more acute symptoms had passed away, and the above plan had been fully tried, and yet the disorder not yielding as desired, but now evidently on the increase, some other drugs must now be called into requisition. In my own mind it was suggested to give the cream of tartar a fair trial, with the continuation of two-grain doses of the mercurial once daily. At this juncture Dr. Sexton saw the patient for the second time, and most cordially agreed to the plan suggested. He suggested further that friction to the surface of the lower extremities be used once or twice daily, of salt, vinegar and mustard.

This course was continued until from one to two ounces of the bitartrate were given daily. In addition drinks were allowed of cider, holding in solution horseradish, juniper berries, etc.; and at night when restlessness or griping of the bowels, from too frequent action of the cream of tartar, an anodyne composed of Sweet Spir. Nit., one part of two ounce mixture, and six parts of Spiritus Mindereri holding in solution two grs. of Morphia; dose, a teaspoonful. While these remedies were being used other domestic means were allowed, such as water melon seed tea, parsley, dandelion, etc. Ten days after the patient was placed under this treatment a chill suddenly occurred in the evening about four o'clock, followed by a well-developed fever, which gave the sufferer an unpleasant night. At four in the morning I was summoned to see my patient. I found present great heat of the general surface, with a severe pain a little below the left groin on the inside of the thigh. The surface was very tender and considerably swollen, having a light blush of red, simulating an imperfectly formed erysipelas. This inflammatory action rapidly extended downward until it embraced the surface of the limb as far as the ankle joint. It extended upward to the umbilicus, and thence across the abdomen, taking in the privates, right iliac, lumbar and hypochondrical regions. My impression was that an abscess was forming on the inner side of the thigh, and its completion would be salutary, and so expressed myself to the friends. Dr. Helm saw this state of things at this time, and expressed the opinion that the present imperfectly formed erysipelatous action would, in all probability, result in a collection of semi-organized pus, and such an occurrence would be highly beneficial, working a crisis in the case; that it was one of nature's efforts to form a crisis to get rid of the large amount of morbid material effused into the cellular tissue.

In this view we fully agreed, and was anxious that nature would accomplish it. But at the end of forty-eight hours the symptomatic phenomena began to recede, and finally disappeared without the consummation wished for. Upon this there arose a very curious state of the skin, corresponding to the seat of this peculiar inflammation which had preceded. It became irregularly checkered with

Digitized by Google

deep leaden-colored lines, the interspaces filled with the skin of natural hue. This condition of the skin obtained in a less degree on the right lower extremity where the abortive inflammation did not go. These bluish lines finally were developed into what appeared to me to be varicose state of the capillaries of the integuments. If this be the correct interpretation they must have multiplied many times; for they attained to the size of a crow quill in diameter. The largest cluster was situated upon the dorsum and crest of the left illium, at a point corresponding with the anterier superior spinous process. Now when this unsuccessful issue had passed the kidneys failed almost entirely to perform their depurating function; the quantity of urine secreted in twenty-four hours did not amount to a half pint, and some days even less. It also now became very evident that serous accumulation was going on in the cavity of the abdomen. Till this the appetite had been sufficient to maintain the integrity of the life forces; but now the function of digestion exhibited signs of interruption, such as a sense of fullness of the stomach after eating, whether the quantity of ingesta taken was large or small. More or less flatulency with griping pains in the bowels.

The mind of this patient was desponding from the beginning until the end. It always seemed to annoy him to intimate that there was anything in his disease which indicated a favorable result. Having satisfactorily persisted in the last course of treatment, and thoroughly convinced it was effecting no good, some other agencies must be sought for and applied. Calomel and squills were suggested, and the patient put upon their use. At this point in the history of the treatment Dr. John Arnold was called in joint attendance in the case, who, after a careful consideration of the history of the young man, suggested the use of the infusion of digitalis, to which we most cheerfully assented. Then the prescription was as follows:

℞. Calomelas, grs. xx; Pulv. Scillæ, ʒj; M. ft. Pilulæ, 10. One to be given every three hours, and contiuued in this way so long as the stomach will tolerate, or the effects of the calomel is not shown constitutionally.

℞. Ifus. Digitalis Oss. Sig., a teaspoonful every six hours.

These medicines were perseveringly taken for more than two weeks without intermission. At one time the simple pill of squills was substituted for the calomel and squills, and then again they were alternated. The infusion of digitalis had to be diminished in quantity two or three times during its administration. When these drugs had been given four or five days the quantity of urine increased to five pints in the twenty-four hours. However, the range mostly was from two to three pints. With their use the dropsical effusion diminished considerably, so as to be a little encouraging. But it was manifestly obvious that these agents were losing their therapeutical power, as at first displayed. To increase the difficulties of this case we had engrafted upon the dropsical malady a malignent attack of "Diptheria," affecting the tonsils, curtain of the palate, and

Digitized by Google

the whole cavity of the fauces, extending through the nasal passages. The symptomatic fever was marked in its character with a loss of voice from the beginning of the seizure. During the second or third day of its progress cough was present, showing threatening of the trachea. Owing to the previously debilitated condition of the system there was not enough tenacity in the exudation to resist the expulsive force exerted by the act of coughing, and thereby he was enabled to expectorate freely enough to avoid the horrible necessity of suffocation. Within the second and third days he expelled from the air passages large flakes of the false membrane, yet before the trachea was seriously involved the acute stage of the affection had passed; and although its production was rapid and great, still its expulsion was fully effected sufficiently to keep the air tubes open. The amount thrown off in this way was enormous, not less than one quart a day. Whilst this was in progress there appeared to be a gradual diminution of the dropsical accumulation. This was especially true of the abdomen. The salivary glands were unusually active during its whole course. He complained that the lower extremities were not present, and that he was losing control of them, and remarked that he was about losing his powers. These facts were made known by means of a coarse whisper. Two days before his death the matter cast off from the lungs changed its odor and color. The former indicated the incipient changes of putrefaction, and the latter would remind one of fermenting sorghum for consistence and color. Every three or five minutes there would be expectorated a quantity equal to a large tablespoonful of this peculiar diseased production. The original seat of the disease, fauces, palate and tonsils, had pretty much cleared off at this stage; but the mucous membrane still retained the characteristic redness, studded over with what seemed to be indolent, irritable granulations, apparently ready to bleed upon the slightest provocation. When the vital powers became so much exhausted as not to afford physical force adequate to the act of coughing, the rapid accumulation of the morbid product in the lungs soon shut out the ingress of air to an extent incompatible with the longer continuance of life.

The treatment of this phase of the case was that usually relied on for the cure of this disorder. Muriated tincture of iron, and quinine, with free exhibition of chlorate of potash, as constitutional medicaments, and the nitrate of silver, and persulphate of iron; also a gargle composed of vinegar, salt, soot and water as local applications. Also the free use of animal broths were insisted upon, together with wine and brandy.

We have been thus particular to detail all the changes and phenomena this disease observed during its entire history, concealed as it was to me from the commencement to the fatal issue, in connection with the medicinal agents employed to combat the affection. It is to be understood that the seat of the disease was never clear to our minds, and we were left to conjecture in regard to this question.

Digitized by Google

Although, as has been stated, the concurrence of opinion of all concerned in the treatment was that the point of departure from healthful action began in the subcutaneous capillaries, still the curious circumstance of the enlargement of the cutaneous vessels of those parts below the imbilicus involves such a theory in much doubt and uncertainty; yet no one could foresee the possibility of such a symptom arising, for to our observation it stands alone. The mind is naturally enough led to the correctness of the opinion that fixes the first deviations from the normal condition in the small vessels beneath the skin. We can not conjecture anything so likely to effect this varicose state of the superficial venous radicals as that of obstruction in some one of the large venous trunks; *i. e.* the *vena cava ascendens*, or perhaps the iliacs. Now this does not explain the appearance of the first effusion in the neck; neither does it determine the nature or situation of the obstructing cause; and therefore we are not extricated from the mists and fogs, preventing a satisfactory view of the essential pathology of the disease. From this we shall pass.

The term *Dropsy* is only regarded as one of the most prominent symptoms, or an effect of a primary morbid condition of the solids. And it is said this morbid condition of the solids constitutes the essential malady, to which the physician's attention must be directed in order to obtain rational views concerning its natural and remedial management. The cure of this disease does not consist so much in the removal of the dropsical accumulation—if indeed at all—as in correcting the disordered state of the vascular system, upon which the effusion depends. In what does this morbid condition consist, and in what structure is it chiefly located? Now it is asserted that this morbid condition which gives rise to dropsical accumulations "is seated in the arterial system, and is in its nature closely allied to that of inflammation." Agreeably to this view dropsical accumulations are the result of an increased action of the exhalent vessels, attended with a general pyrexial condition of the system. In support of this doctrine the attendant phenomenon of inflammation, when passing into resolution, or from the acute to the chronic form, an effusion of serum is apt to occur. Attacks of rheumatism, gout and sprains frequently pass off by the effusion of serum into the contiguous parts. Hydrothorax is frequently the sequel of pleuritis, and hydrocephalus often follows inflammation of the arachnoid membrane. It is further urged in the confirmation of this teaching, the tendency of all the serous membranes, when attacked by inflammation, if not promptly arrested, is to terminate in serous effusions, and is therefore looked upon as corroborative of this view of the pathology of Dropsy.

To this doctrine that dropsy depends upon a general pyrexial state of the system, induced by local determinations in the arterial capillaries nearly allied to that of inflammation, it has been objected that dropsical effusions have followed excessive hemorrhage, and other

Digitized by Google

exhausting causes where it is impossible for inflammation to have taken place. This objection at first appears to be very plausible, opposing a difficulty that can not be reasonably answered. But pathologists have observed that in those animals which die from the loss of blood, *post mortem* phenomena occur which would indicate that in those membranes from which effusions take place there exists a morbid condition nearly allied to that of inflammation.

"The experiments of Mr. Seeds and Mr. Kelley show that in animals bled to death the meninges of the brain, and other membranous tissues, almost invariably exhibit a highly injected and congested state, similar, in all respects, to what occurs in actual inflammation. In many instances of this kind a considerable quantity of watery effusion is found within the head; and in some instances high and tumultuous action of the heart and arteries occured shortly before the animal expired."

Dr. Eberle says:

"After all it is highly probable (from all the facts) that every case of dropsy is essentially phlogistic, so far at least as relates to the immediate local excitement which gives rise to the effusion. The general system, however, does not always participate in the local effection. the heart and arteries receiving no sympathetic impulse from the local, irritated or sub-inflammatory action. In such cases the general circulation is languid, and debility and relaxation characterize the disease. Where the heart and arteries do sympathize with the local hydropic affection, and this is by far most commonly the case, the pulse will manifest more or less of a pyrexial state, being sometimes full, hard and active, or small, tense, quick and frequent."

Thus we have a general view presented of the doctrines entertained with respect to the proximate cause of dropsy. Now a few words upon the subject of the rational application of those agencies recommended by authorities for the cure of these pathological states, which have been pointed out as constituting the complaint to which the term dropsy has been applied. From the history of the case now being considered, and the pathology exhibited, the consistency of the treatment will appear at once rational, at least to our own mind. As will be recollected, in giving the successive steps in the management of the case, it was stated the first prescription consisted of calomel and Pulv. Dov. At this time we had no signs of a feverish disposition, but still we apprehended that some change was effected in the cutaneous capillaries, nearly allied to that of inflammation, and consequently we could think of no compound calculated to counteract, correct, or substitute a new action which would relieve these structures of their disordered state. The well known effects of opium—to determine to the skin while it suspends every other secretion, associated with ipecacuanha and sulphate of potash, the former disposing to the equalization of the blood, and the latter for its diuretic powers—seemed to fulfill all the

Digitized by Google

indications. However, in the further continuance of the case we had to endeavor to meet a pyrexial condition of the system, which demanded the introduction of contrastimulating means whose effect would be direct and powerful. Thus it was that Tart. Ant. was used to arrest this kind of morbid action. Because the fever was regarded as the measure with which the peculiar changes were progressing, to the increase of the dropsical accumulations. When the phlogistic symptoms of the disorder had passed, these more direct and potent anti-phlogistic instrumentalities were discontinued. The mercury was still retained, but in diminished doses. At this stage it was attempted to provoke the kidneys to increased activity, and for this purpose bitartrate of potassa was chosen and freely given in conjunction with diuretics in less favor. If the kidney secretion could be increased, it was thought the removal of the accumulated dropsical fluids would be disposed of through that channel, and thereby the system freed from the disturbance of so much foreign matter. The sub-murias was kept up for its alterant action, preventing those morbid changes inflammatory in their character. The kidneys refusing to respond to the diuretic properties of these articles, we augmented the dose, with a view to their cathartic action. The cream of tartar was administered in the form of the comp. powder of Jalap. The bowels were freely purged, but without watery stools, such as are necessary to remove the effusions. The irritation of the mucous membrane of the bowels increased to an amount contra-indicating their further use, for it is a well-established principle in the management of this affection that whatever induces much irritation of the mucous tissue of the intestines will result in disadvantage, by co-operating with the primary morbid action. As has been set forth in the history of the case presented, we approach the period when the febrile phenomena subsided, and the general condition of the system was characterized by that of debility and relaxation. Under such circumstances it was proper to have recourse to those agents most likely to effect the absorption of the dropsical accumulations, by assisting vital action, or the powers of nature in her wonted attempts in getting free from the disease. Hence, the continuation of mercury associated with squills. The almost universal testimony in favor of their combined powers, warranted their adoption without doubting.

We will conclude in directing your attention to a few remarks upon the medical virtues of Digitalis. A great contrariety of opinion has been expressed by different observers, with reference to its therapeutic value. Some have extolled its efficiency in those diseases to which it is supposed to be applicable, with a degree of assurance not attributed to other remedies appropriate in the same pathological conditions; whilst others of equal eminence do not speak so confidently of its curative qualities. The disease in which it has been found most serviceable is the various forms of dropsy.

Dr. Stille says: "The remedial virtues of Digitalis have been more

Digitized by Google

clearly exhibited in this than in any other disease, for the cure of which it had been long applied empirically before it was included in the *materia medica*." It was for his success in treating dropsical affections with Digtalis, that the name of Withering will always occupy the most conspicuous place in its early history. To this day even his precepts in regard to its administration continue to be the safest guide for those who employ it. "I use it," says this author "in ascites, anasarca and hydrops pectoris, and so far as the removal of the water will contribute to the cure of the patients, it will cure them." It resulted from his experience that if the patient be of great natural strength, warm skin, and florid complexion, and with tense, corded pulse, or if the effusion itself be hard and circumscribed, or the anasarcous limbs be solid and resisting, Digitalis will be of little, if any, service, particularly if purging by the neutral salts, venesection and squills, do not precede and accompany the use of the former medicine. If, on the other hand, the pulse be feeble, the countenance pale, the lips livid, the skin cold, the belly soft and fluctuating, and the limbs readily pitting on pressure, the diuretic action of the medicine is generally successful. The conditions last enumerated fully apply to the symptoms of the patient, which we are considering at the time when Digitalis was administered, and the effects have already been given.

Darwin regarded the medicine as being most successful when the patients had passed the meridian of life, and accustomed to indulge too freely in fermented and spirituous liquors. He always suspended it on the occurrence of sickness of the stomach.

The following is the enumeration of its effects when administered in large doses: According to Boehaave Digitalis may produce ulceration of the mouth, œsophagus and stomach; but this has not been confirmed by subsequent experience. Withering's descriptions correspond with modern observations. When given in large and quickly repeated doses, it occasions sickness, vomiting, sometimes a copious flow of saliva, purging, and confused vision, objects appearing green or yellow; increased secretion of urine, with frequent motions to void it, and sometimes inability; slow pulse, even as low as thirty-five a minute; cold sweats, syncope, convulsions, and death. When given in smaller quantities it produces most of the effects in a lower degree.

"It is curious," says Withering, "that the sickness with a certain dose of the medicine, does not take place for many hours after its exhibition has been discontinued; that the flow of urine will often precede, sometimes accompany, and frequently follow the sickness at the distance of some days, and not unfrequently be checked by it. The sickness thus excited is extremely different from that occasioned by almost every other medicine. It is peculiarly distressing to the patient; it ceases and returns again as violently as before, and thus it will continue to recur for three or four days, at more and more distant intervals."

Digitized by Google

Now it would appear from these observers that this is a very powerful agent, and when resorted to for the cure of disease, its effects should be closely watched. In our case some of the consequences of this article were observed, whether wholly attributable to its sole agency we will leave for you to determine. First, the increase of the quantity of urine, and frequent motions to void it. The pulse was reduced from eighty to fifty. When this state of the circulation existed, the patient complained of a sense of great prostration or exhaustion, with a feeling of emptiness of the stomach and fullness of the head. The pupils were dilated; the mouth and throat were at the same time very dry, with an increased desire for water. These were the most distinct evidences of its peculiar action that we were competent to recognize. My personal experience is comparatively nothing. But my friend Dr. John Arnold prescribes it with a great deal of assurance in dropsies, and so far as we were prepared to judge, are willing to attribute to digitalis the production of the chief symptoms above enumerated; but it was not adequate to procure the happy termination of the case, although the unfortunate issue may be laid to the intervention of circumstances for which the medical arm is but too short.

I have overlooked the quinine prescription, which needs but a short notice. It is my opinion it did no good; though I had in my mind at the time the idea that a tonic—for it was with this view it was given—influence might be of benefit, reasoning that the nervous system has some not well determined control of the circulation, especially of the capillaries.

DISCUSSION.

Dr. Harding, of Lawrenceburg:

The gentleman's description of his case brought up to my mind vividly a case that has recently been under my own care. It occurs to me not improper, in connection with the paper just read, to make a statement of the case briefly, though I doubt not differing somewhat in pathology from the case detailed by Dr. Moffett.

I have been for the last two or three months treating a case of general dropsy—anarsaca—where the hydropical collection was very great—great in the extreme; but this case was associated with valvular disease of the heart, unmistakeable, which I doubt not primarily was the pathological cause of the trouble. The case had existed for several months when it first came under my observation. It was a soldier who had been discharged from the army on a surgeon's certificate of disability, because of a valvular disease of the heart, some two or three years preceding the time I saw him. This case was seen by some other physicians, from whom the patient had gathered an expression of opinion with regard to his condition, and every expression of opinion, whether professional or non-profes-

Digitized by Google

sional, was unfavorable. I felt but little hope for him, though he s a young man of only twenty-five years of age. He had got tired waiting for the slow effect of medicine, a difficulty I found exceedingly in the way of inducing increased action of the kidneys. The secretions of the kidneys were scanty, the skin dry and harsh, and with an inability to lie down. He could sleep in no other than a sitting position I put the patient upon the use of muriatic tincture of iron, large doses—twenty-five drops about every six hours. I did not come to this at once, but in the course of time I came to this treatment, and it was successful—eminently successful. Yesterday morning before I left home I saw this patient on the street able to get about, though not able to take active exercise. It required a period of two or three months to do this.

But to make my remarks short and brief. After trying digitalis and other remedies, in this case I administered muriated tincture of iron and acetate of potassa, both in large doses; for instance, this prescription, 4 oz. acetate of potassa dissolved in a quart of water, an ounce of this mixture to be taken every three or six hours; 25 drops of tincture of iron nearly as frequently. Of course I used other remedies, but these were the only ones that seemed to have much efficiency; and a permanent cure was effected as far as regards the hydropic affection. The valvular disease of the heart, of course, continued.

The gentleman was kind and liberal enough to invite some criticism in regard to the treatment of the case he reported. For myself I take the liberty of questioning somewhat the propriety of the long continued use of mercurials in this case. To my mind it seems not very well adapted to overcome the difficulties I should presume to exist, although we have no statement of the precise pathology of the disease. This may be contravening the opinion of high authority, but my own experience has not given me much confidence in the use of mercury, especially in the treatment of this class of diseases.

Another idea occurred to me. Is it not possible that the result of this treatment in some degree was not accompanied with what the world calls diptheria? May it not have been dependent upon some depressing effect and local irritation, from long-continued use of mercurials? I do not know that it is so, but still it is well enough for us to consider in the treatment of a case like this, where it has been so honestly and ably detailed as it has, if such may not be the case.

Digitized by Google

DIGESTIVE ASSIMILATION OF MEDICINES.

BY W. J. ELSTUN, M. D., INDIANAPOLIS, IND.

THIS essay presumes merely to present some reflections, with a hope that discussion may lead to clearer ideas, and greater knowledge of a subject which with our present information, may, perhaps, be only guessed at, or at most theorized about.

One not endowed with many years of professional learning and experience is not expected to enter the mysterious realms of the sciences of a profession, wherein the learned of ages have stood confused and confounded. But it has been said that the tyro may theorize upon any topic, not assuming too much arrogance or dictatorial dogmatism.

On the subject of theorizing I was pleased to find the following expression from a distinguished author: "When we are inclined to hazard a theory that is barely supported, we should take care to state it as a theory, and not to bring it forward as a truth. It has not been an uncommon habit among scientific authors, who should be of all men the most careful and exact, to confound assertion with fact—to mistake hypothesis for truth. In such illogical and incorrect reasoning is to be found the true source of a multitude of errors"*

It sometimes becomes the duty and very profitable pleasure of a younger man to present, publicly, something of that which he may have acquired from study, comparison, and digestion of the multifarious and wonderful things which have passed through his mind since groping in this labyrinthian sphere, full of mysticism, vagaries, skepticisms, theories, contradictions, facts. If he be more or less skillful in this, he may draw upon the knowledge of others and enrich his own; or even in the diversity of discussion may discover something new, if it be only the developed reason for some troublesome diversity of opinion. Thanks to this duty it becomes my privilege to express some ideas and theorize upon their probabilities.

First, then, it is now generally accepted that medicines act through the medium of the blood; that is, the substance is taken into the blood, and through its circulation carried "to that part of the system

* Headland Act. of Med., p. 21.

Digitized by Google

upon which it acts."* But this language is objectionable, being indefinite, and conveying the idea that the medicine goes nowhere else than to the part acted upon. Another objectionable expression seems to indicate that the medicines select the organs and tissues upon which they operate. This is usually said without giving a reason or attempting an explanation.

Out of this grows the question: Why do medicines operate on certain organs or tissues to the exclusion of all others? In a given proposition, medicinal substances combine or mix with the blood; the blood passes rapidly through every part of the body; perhaps only one distinct and small organ seems to be affected thereby. It cannot be that the medicine takes its course directly to a given organ, nor that the organ draws the substance from any remote part of the body. Evidently, however, the medicine is received by the organ, and the organ as evidently takes the medicinal substance from that blood which passes through its capillary blood vessels. With every pulsation the organ takes a given quantity of this material from the blood into its own tissues, until so much be taken as to produce the perceptible effect. Why does one organ appropriate this medicine, and in what manner? Does the substance become a part of the ultimate tissue of a certain organ; and if so, why is it appropriated by any special organ? Again, does it act only as an irritant, as foreign matter, or does it enter into and change the actual physiological and structural condition of the tissues of an organ, and consequently its functions are visibly affected?

This subject may be discussed more readily perhaps under the following propositions, remembering that a perfect organ consists of itself as a whole, its nerves, its blood vessels, and its glandular or other structures; either or all of which being affected, may change the functions of the organ.

I. Medicinal substances are assimilated by the ultimate tissues of the various organs in the same manner as the nutriment is assimilated from food. The organs are affected by aliments; they are toned up, strengthened, stimulated; or the activity of organs may be depressed by the effects of ordinary kinds of food. So with medicines, but in a more active and greater degree.

II. Medicinal substances are assimilated by the same selective or physiological affinity, through which each organ selects from the blood the particular food material required for its own support, nourishment or vitality.

III. Medicinal substances may be either selected by an organ through direct affinity (for the substances), or the substance may be combined so intimately with the nutriment, or aliment, appropriated by an organ, as to be taken with the food material independently of any affinity for the medicinal substance.

* Headland, p. 66.

Digitized by Google

That medicines are thus assimilated may be assumed by a process of diagnostic exclusion, from the fact of there being no other logical or rational theory for one organ more than another being affected by any given substance, since the same blood containing the same substances passes through every part of the body.

It is now considered as fully demonstrated that medicines are not conveyed to the system through any medium of the nerves. Even those poisons which effect exclusively the nervous system, if injected into the limb, are not conveyed to the general system through a large nerve trunk. On tho other hand when the blood is allowed to circulate the effects of poisons thus introduced are rapidly manifested.

Thus medicines may be introduced into the blood by other means than the digestive system; as, by cuticular absorption, or hypodermic injection, and produce the same effects. Medicines, or other assimilative materials, are in the blood in solution, or so emulsified as to be equivalent to solution. Introduced locally the solution enters the capillary circulation, and is distributed directly to the tissues of the immediate locality; this, too, more readily than from the general circulation, because the entire quantity is confined for the present to the capillary absorption, or assimilative structures of the immediate locality.

Now if medicines are assimilated at all by the tissues, as assumed, it follows, under the second proposition, that they are assimilated by special organs, because of a physico-vital selective power of the organ. Consequently the effects of the medicine are shown as acting upon a single organ. This conclusion pertains because the blood has retained this substance, and carried it, perhaps, through every part of the body, and no effects have followed, nor will any effects follow until in some organ the active substance has become a part of the living, acting vitalized tissues, and now produces its effects upon the functions of the organ in which it is assimilated.

Tonics are considered to build up and furnish absolute nutrient material to a part or the entire system. Such medicines enter directly into the tissues, forming a part of their ultimate composition. The blood may be taken as typical of this proposition. Blood elements are furnished, and the blood nourished and made strong by them. A distinguished author treats of "Aliments as one of the Orders of Restorative Hæmatics."* By a very easy graduation he would make all restorative hæmatics actual aliments, which they are here assumed to be. All other parts and tissues are here also assumed to be supplied with medicines operating as aliments. All the proximate principles of the physiologists may be supplied to the system either as food or medicine, accordingly as they may be administered in either form.

The blood, nerves, brain, muscles and bones, may be supplied with aliments in the form of medicines. It is concentrated food, and no

*Headland, page 609.

Digitized by Google

one denies the plausibility of the conclusion in the case of those substances whose effects are thus readily understood. The same may be claimed for the gaseous, or etherial elements. They are taken into the blood by inhalation, or otherwise, and the effects are as various and wonderful as their combinations and properties.

It is in these, and other not-well-understood instances, that differences of opinion arise and exist, as to whether medicines act as aliments, or enter into the tissues and become vitalized as the structure of the tissue is vitalized, retaining their peculiar properties, and producing certain effects upon the tissues of which they are now a living part.

Since the proof is so easy and clear in the instance of tonics, hæmatics, nervines, etc., why is the assumption of the universal vital assimilation of all substances which act in any manner upon any tissue of the body not a plausible theory, if not yet demonstrated by the logic of actual experimental facts.

The effects of tonics and hæmatics are the seen evidences of the similar appropriation of medicines and aliments, while the undemonstrated instances must be considered as the yet unseen, which are assumed in the general proposition that consequently all effects of whatever may enter the tissues are the result of the same physico-vital assimilation.

DISCUSSION.

Dr. L. D. Waterman, of Indianapolis:

I will relate what I understand to be the position taken in this paper. It takes the position that every article which is given as medicine is either a food or a poison, and that when it is a poison it should not be administered. In other words, every beneficial agent we can use in the treatment of disease, acts as food, and is assimilated by that organ or part of the body which is benefited. I agree in the main with the position taken. I believe the doctrine to be true, that in order for any agent to be beneficial to the animal economy, it must act by being assimilated. I speak now, of course, of agents taken into the system.

Dr. J. Moffett, of Rushville:

If the position of the paper be true we commit a great many errors in the application of remedies. It is very fashionable, even among homeopathists, to depend largely upon the most deadly poisons known in nature for the correction, restraint and cure of diseases. For instance, aconite, strychnine and opium are in no small degree powerful poisons. I would be very sorry to be deprived of the use of strychnine in certain forms of chronic diarrhœa.

Then why is it that we take away a large amount of the pabulum of life-blood, for the purpose of relieving spasms, for instance?

Digitized by Google

There is a superabundance, so to speak. As we say, there is a determination of blood to the brain, which is about to be overcome, and we want to lessen the force of the heart's action, and do that by withdrawing blood—the pabulum of life. The fundamental truths of physiology teach that every part and particle of the organism has what is called molecular life; it is not the blood that forces itself upon the organs, but the elective power of the particular organs that selects from the blood that which it wants for its growth. Suppose a physician dissevers a member from the body, and after a time he places it back and circulation is restored in that dissevered member, how is he to explain that? Is it not dependent upon the fact that inherent portions are remaining sufficient to give renewed life to the process of connecting itself to the other part? A fact of that kind teaches us that there is inherent power in every portion of the body by which it selects from the current of circulation the materials adapted to its wants.

Digitized by Google

CASE OF DISLOCATION OF FEMUR

UPWARD AND BACKWARD.

REDUCED BY MANIPULATION.

BY M. SEXTON, M. D., RUSHVILLE, IND.

JUNE 10th, 1868.—M———, an adult laborer, was thrown from a wagon by sudden violence, so that the force of the fall, as shown by contusion, was spent below the right knee, driving the head of the femur upward and backward, producing the most common form of dislocation of that bone. Dr. Moffat was called, and correctly diagnosing the character of the injury sent for assistance. Dr. Pugh and I visited the man in two hours after the accident, and upon examination confirmed the diagnosis. He was lying on his back, with the knee of the injured limb resting across the well thigh, the toes on the instep of the well foot. There was immobility of limb, except in an inward and upward direction. No rotation or extension could be made, and any attempt to move head of bone produced great pain. The limb was shortened as much as two inches, though no measurements were taken, as the diagnosis seemed otherwise perfectly clear.

We proposed in this case to attempt the reduction by manipulation, but for fear of failure had Jarvis adjusted in readiness, thinking it probable we might have to resort to its use. Not one of the surgeons present had ever witnessed reduction of a dislocated femur by manipulation, and we had, of course, only a theoretical idea of the necessary movements.

The patient being placed on his back on a table, and quite fully under chloroform (administered by Dr. Pugh), I seized the ankle with my right hand, and with the left grasping the knee behind (Dr. Moffat pressing upon and steadying head of the bone) began the operation. The leg was flexed on the thigh, carried well across the opposite thigh, and in this position carried up as high as possible. The knee was now moved across until the thigh and leg were in line with the body, when extension was made with slight rotation outward, and the leg was brought down alongside of its fellow. When

Digitized by Google

the thigh was carried down to about a right angle with the body, the head of the bone slipped with an audible snap into the acetabulum, and the operation was complete. As there was almost no resistance to overcome, the operation was effected easily and safely, in about the same time the same movement could be executed upon the limb of a well man. Though Dr. Moffett says he used considerable force in directing the head of the bone into its socket, I am inclined to think the most good to be effected by steadying the head of the bone in this movement is to prevent an accident which may occur, namely, the slipping of the head of the bone from the dorsum of the ilium into the ischiatic notch.

In the reduction by manipulation—whichever of the four common forms of dislocation may present—the leg is carried in the only directions in which it can be moved without great pain and violence.

In the operation as effected in this case there may be said to be three movements: 1st, the carrying the thigh upward across the opposite thigh, and flexing it as far as possible; 2d, carrying the thigh across and into line with the body; and 3d, the extension of the leg and thigh with a slight rotary motion outward. Though there are these three distinct movements, or directions in which the limb is carried, the whole operation really consists of one continuous movement—that of a regular and gradual sweep of the limb over the other upward, across the body, and then downward alongside of its fellow, the reduction being usually effected when the thigh is brought down to a right angle with the body, as occurred in this case.

After the operation we tied the patient's ankles together, placed him in bed, and enjoined strict quietude and rest. No violence by our proceedings was done to the muscles, joint, or head of bone, such as seems unavoidable when pulleys are employed. No inflammation, or considerable swelling about the joint occurred to require after-treatment, and after two or three weeks' rest our patient was about his usual employment. The cure was followed by no limping, or stiffness of the limb.

We felt no little relief at the easy accomplishment of what is justly considered among the difficult and important surgical operations; and knowing the rarity of the accident, have thought this introduction of the report of the case would be satisfactory, and perhaps to many instructive.

It is not our intention, nor would it be proper to consume time in the tedious description of the philosophy of the operation. It is enough to say that reduction is mainly effected by muscular action.

In this dislocation there is laceration of the capsular ligament, *ligamentum teres*, and the external rotator muscles, the head of the bone resting on the deeper-seated muscles, with the *triceps adductor* put on the stretch. Reduction was effected in this case by contraction of the *triceps adductor*, the action of which in the mal-position of the femur was powerless, but which became effectual as soon as the head was disengaged and brought down by carrying the knee

Digitized by Google

upward and across the body. From the ease with which we accomplished reduction in this case, the dread with which we have been in the habit of viewing the operation is to a great extent dispelled. Though this was certainly a case the least formidable in character, (for cases are reported in which, in the hands of the most skillful, the operation has failed, or only succeeded after many trials,) yet every case, however unpromising, should be tried by this method before resorting to any other.

At the risk of being a little tedious, and quoting what many of you have seen, we transcribe from Ranking's abstract the following portions of a paper by M. Dolbeau on the reduction of dislocation of femur, by combined flexion and extension, or as he terms it, Despres' method: He says, "Ponteau, in the last century, first conceived the idea of reducing this dislocation without employing force, recommending flexion and moderate traction, at the very moment Petit was inventing his powerful traction machine. The gentler method has been subsequently recognized as the preferable one by various practitioners; but to Despres, in 1835, is due the honor of combining into a method Ponteau's plan of flexion with rotation outward. During ten years M. Dolbeau has had occasion to resort to this method eleven times, eight of which being ilio ischiatic, two ilio pubic, and one ischio pubic dislocations. They had all been easily reduced by himself alone without assistants, all the patients having first been submitted to chloroform. His experience, therefore, leads him to conclude: 1st. That all recent dislocations may be easily reduced by Despres' method. 2d. This may succeed even when force has been employed in vain. M. Dolbeau gives a case of dislocation of fifty-five days standing which he reduced after several attempts in vain had been made by the pulleys. 3d. The flexion of the thigh, combined with rotation outward, permits the head of the bone to be disengaged from all obstacles retaining it, causing it at the same time to traverse the various parts of all the circumference of the cotyloid cavity, until it is brought in relation with the seat of the capsule, through which alone it can gain readmission. 4th. Always before resorting to force Despres' procedure should be tried. M. Dolbeau says he proposes nothing new, but only recalls attention to a simple manœuvre in every one's power to execute, and the value of which has been doubled since the discovery of chloroform."

It would be interesting to the student of surgery to trace the history of the treatment of dislocated thigh. Contrary to the assumptions in the extracts from M. Dolbeau's paper, the plan of reduction by manipulation is as old as the annals of surgery. Says Hippocrates, "In some the thigh is reduced with no preparation, and with slight movement; and in some the reduction is effected by bending the limb at the joint and making rotation."

Richard Wiseman wrote in 1676; Richard Boulton, in 1713; Daniel Turner, in 1742; Thomas Anderson, a Scotchman, in 1772; Ponteau, in 1783; Dr. Philp Lyng, Physician, Philadelphia, in 1811;

Digitized by Google

Dr. Nathan Smith, Prof. of Surgery in New Haven Medical College, as early as 1815. Each wrote of or taught the method of reduction by manipulation; Dr. Smith, in 1824, on oath, even affirming as follows: "I do not think the mechanical powers, such as the wheel and axle, or the pulleys, are necessary to reduce a dislocated hip, or any other dislocation." (*See Gross' Surgery and Hamilton on Dislocations.*)

It is likely that the profession is as largely indebted to Dr. Reid as to any other surgeon for the general good favor in which it regards this operation. He, in 1851, by published articles embellished with plates, directed general attention to this method, and it is often spoken of as Dr. Reid's method. He certainly has no claim to originality, as the references we have given prove, though entitled to the credit due to careful investigation, and scientific explanation of the steps of the operation.

DISCUSSION.

Dr. J. S. Bobbs, of Indianapolis:

It strikes me that this paper deserves more than a simple reference. Any gentlemen having experience in dislocations must have found what an embarrassing subject it frequently is. The case presented here was certainly an unusually successful one. This thing of overcoming muscular contraction is a very serious matter—very painful to the patient and very annoying to the physician. And an additional source of annoyance arises from the fact that many have not the most useful appliances for these purposes, and it is no easy matter to extemporize them. Many practitioners go through a large practice without having a case of dislocation of the hip, and there is no strong inducement to be provided with the appliances necessary for a reduction of such cases. A resort to the means referred to in this paper is, perhaps, not so much cultivated as it might properly be. We are all much in the habit, I apprehend, of resorting to that means which we have found successful in other cases. While I have succeeded by other means, and in some instances in a reduction by manipulation, I cannot say that in a case of dislocation of the hip joint I have succeeded in reducing by manipulation. In many instances it is undoubtedly successful; and the manner in which manipulation should be executed is a matter we should be acquainted with.

Dr. C. N. Blount, of Tipton:

The paper just read is an appropriate and pleasing one. I have not had much experience in this kind of practice; I have but one case of that kind, and that was quite an easy thing. A little girl stumbled over something and sprained her knee as her friends supposed. Some four or five days afterward I was called and diagnosed

Digitized by Google

the case as dislocation of hip joint, and administered chloroform, and by the manipulating process found it an easy matter to reduce the limb. The reduction, conducted on the principle indicated in the paper, was perfect and complete, and the sufferer now knows no difference. I never did anything more than to enjoin quiet. I merely wish to report this case in connection with the paper read.

Dr. J. I. Rooker, of Castleton:

This was the usual way of treating such cases in the Commercial Hospital, Cincinnati, when I was Resident Physician. In one case of several months' standing adhesion was broken up and reduction accomplished by this means. I had one case of dislocation of the shoulder joint—a muscular man on whom a physician had worked some four hours. I put him under the influence of chloroform and had it reduced in four or five minutes very easy. I never saw it any other way than successful.

Dr. Jas. Thompson, of Harrison, Ohio:

I don't think sufficient stress has been laid upon the use of chloroform. I have known cases of shoulder joint dislocations where parties have tried the whole night without chloroform, and on administering it success was easy.

Dr. J. R. Weist, of Richmond:

In the case of mine, of dislocation of the hip joint of a strong, muscular man, reduction was effected, I think, on the second trial. This manner of reducing the dislocation of a hip joint, by manipulation has been so long known and so generally recognized by the profession that I am surprised any one questions the feasibility of its being put in practice in nearly every instance, under the relaxing influence of chloroform.

Dr. D. Morgan, of Evansville:

I never have had any cases of dislocation of the hip joint. It is thirty-two years since I commenced the practice of medicine. I have never had a case of dislocation but what I have been able to reduce it by manipulation; and I have generally done it very easily without chloroform. But I think no case should be attempted without administering chloroform for two reasons: 1st. It allays all sensibility to pain. 2d. It is much better to relax the muscles than anything you can get. I have not been in practice for the last few years, since chloroform came into general use; but now no surgeon would be excusable for going to work without using chloroform. It looks reasonable that with a little mechanical ingenuity, (and it is all mechanical after we know the anatomy of the parts, if we use our senses as mechanics,) it looks to me an easy matter. A dislocation of the hip joint is much more difficult to reduce than any other joint, but it is less seldom dislocated. I accord heartily with the paper.

Digitized by Google

Dr. L. D. Waterman, of Indianapolis:

The reason gentlemen who own Jarvis' adjuster have a great deal of trouble, I believe, is because they neglect the necessary attention to determine the exact conditions of the parts involved in the dislocation. I believe if physicians would obey less arbitrary rules and follow their own common sense, looking carefully to the anatomy of the parts, they would find such cases more easily reduced than the books seem to indicate. I have had no experience in dislocations of the hip joint, but have seen the effort made by eminent physicians of Cincinnati to reduce under the method indicated in the paper, and I believe in two instances these efforts failed. One was a dislocation of long standing, and the other was a recent case.

Dr. J. T. Jones, of Franklin:

In every case of dislocation of the hip joint there is a rupture of the ligaments, if upward and backward, or upward and forward. The limb should be brought in the same position precisely as it was, so that the head of the bone can be drawn back to its place.

Dr. W. Hobbs, of Carthage:

The practice of the surgeon always is to find where the head of the bone lies, and make it, as near as possible, follow the same track back as the one it passed out. He must get his knowledge of the track it pursued as it passed out, from his knowledge of the anatomy of the parts, as well as the direction, and kind of force that put it out of place. A great error in surgery in the reduction of dislocations seems to me to be that a recent innovation has been established in furnishing such ropes and pulleys as Jarvis' adjuster. It is intended to furnish us means to use when our correct knowledge fails us. The reason we need to produce such a violent extension is because we don't return the bone in the same direction it traveled, and we have to make a new track for it. If, therefore, we correctly study the anatomy of the parts, I think we will never feel the need of such inventions. The reason we need other means is because our knowledge is limited. In the reduction of dislocations of the hip joint it has been my fortune to have no experience in a practice of twenty years.

Dr. N. Mendenhall, of Thorntown:

I fully concur with Dr. Hobbs in what he has said about making the head of the bone follow the same course backwards which it took in coming out. What little experience I have had seems to bear out that fact. This has been my way, and I have succeeded without the use of chloroform.

Dr. F. W. Beard, of Harrodsburg:

The saying that with proper study we should succeed in these cases by manipulation, brings to my mind a case in Bellevue

Digitized by Google

Hospital, of New York, treated by Prof. Hamilton, who has thoroughly studied the subject, as many of you know. It was a dislocation of the shoulder joint. He brought the patient out and put him under the influence of chloroform to show how nicely it could be done by manipulation, but he failed to reduce it. It was a recent case of simple dislocation, and I concluded if Prof. Hamilton fails in such cases, those of limited experience might also fail.

Dr. J. K. Bigelow, of Indianapolis:

I have had a little experience in the reduction of dislocations. I have reduced a number satisfactory to myself and am surprised that gentlemen who have practiced medicine forty years have not had more trouble in such cases. It may be superior knowledge or skill in mechanical ability in this thing, but I have seen, like my friend who last spoke, professors and gentlemen of great renown who have failed ultimately on some very simple luxation, and especially two or three signal failures in luxation of the hip joint, with chloroform, manipulation and force. Some gentleman very properly remarked that he thought it a matter of considerable moment to diagnose a case of dislocation from fracture. My opinion is that with a surgeon who has not had a sufficient practice, it is a pretty hard matter to get a hip bone back to its place simply by manipulation, without using some force. Probably gentlemen should define what they mean exactly by manipulation.

Dr. Bobbs, of Indianapolis:

The discussion of this paper has raised several questions which I should like to notice. A large majority of all dislocations are readily reduced, whatever method the surgeon may adopt to effect this. And especially in the case of children, and the less important joints, is reduction, whether by traction or simple manipulation, promptly obtained. But it is in complex cases, involving the important joints, that taxes the surgeon's skill, and where I apprehend gentlemen who rely so confidently upon manipulation to the exclusion of other means, will meet with failure. When such surgeons as Frank Hamilton fail, after long and repeated trials, to reduce a luxation, as he admits he has, even in recent cases, it becomes others of us to distrust our ability to command uniform success.

Take, for instance, the dislocation of the thigh upon the ilium in a robust, muscular subject, where the displacement is from three to four inches, much swelling and pain from injury to the soft parts, and where it has existed from twenty-four to forty-eight hours. Now when gentlemen say they can, by simple manipulation, readily reduce the luxation, in all such cases, they can do not only more than I can, but more than the best surgeons in the world have been able to effect. Why is it that the eminent surgeons at the head of the London Hospitals do not rely on manipulation alone for reducing dislocations, if it be so easy and certain a procedure? And yet

Digitized by Google

there is not one that does so, to the exclusion of extension and counter extension.

Note the anatomy of the parts involved, in a case of this character. All the short rotator muscles of the hip have their insertion in or about the trochouters. The neck of the thigh bone receives no muscular attachments. The capsular ligament is ruptured enough to admit the passage of the head of the bone, and is thrust upward and backward, under the glutei muscles, throwing the shaft of the bone to the opposite side. Now authorities instruct us to bring the femur down to its proper position by the use of traction in the direction of the displaced limb, that it may be made to follow the track it made in its displacement. But in manipulation the head and neck of the thigh bone is made to sweep through the soft parts in a circle, and not in the axis of displacement, and thus more likely to be obstructed by the soft parts in its return to the acetabulum.

In all dislocations I first resort to manipulation unless some unusual difficulty presents itself; but I cannot recall a case where I succeeded by simple manipulation, where this existed, and am more inclined to rely upon traction.

I may also add, that I cannot concur in the harsh judgment rendered on Jarvis' Adjuster, as I have found it available in some cases where traction was required. In a case of dislocated shoulder of seven weeks' standing, which came to me recently from an adjoining county, I resorted to manipulation, traction, and rotation of the arm without success, although I spent most of an afternoon at them. The head of the bone was below the clavicle and under the pectoral muscle, and had formed strong attachments. I finally effected the reduction by Jarvis' Adjuster, and the case fully recovered.

Digitized by Google

DISCUSSION ON PUERPERAL CONVULSIONS.

Dr. Wm. F. Harvey, of Plainfield:

Mr. President: If there is anything to be brought out by a discussion of the subject of Puerperal Convulsions, I will make a few remarks. I do not propose to investigate the causes; the question with me is whether there are any new remedies for the treatment of this disease, better than those which have been published. I was recently called in consultation to see a case laboring under that disease, in which the sulphate of morphia and chloroform were being administered. The convulsions were going on, and getting more and more frequent. Some time ago I saw somewhere in some medical journal that to bind chloroform upon certain parts certain impressions were produced upon the muscular system. Upon the strength of that information I proposed to the attending physician to change his treatment, and instead of administering it by inhalation to apply it to the back of the neck, and in addition acetate of morphia on the cheek. In a few moments after the spasms began to cease. Before this perhaps one would scarcely pass off before another would come on; but after this treatment was commenced there were but two clearly marked spasms. In the mean time, however, this patient was delivered. There were no spasms after delivery, which occurred about two hours after the last spasm.

Dr. J. K. Bigelow, of Indianapolis:

In reference to this question I have had but little experience. In one case I had of ordinary labor of two or three hours' duration, everything seemed to be in a normal condition. But about two hours afterward I was sent for hurriedly, with the statement that my patient had convulsions. I found them to be of a general puerperal form, coming on every one or two minutes, and lasting two or three minutes. According to the description given by others I regarded it as strictly puerperal, not connected with hysterics. After doing what I could I sent for Dr. Newcomer, and acted strictly on his suggestion. We gave her large and ample injections, and the moment her bowels were affected the convulsions ceased. She had twenty-four of a violent character. Chloroform did not control the convulsions; it made apparently no impression upon them. They came on with the same regularity, and seemed to exercise the same

Digitized by Google

violence. Some two weeks previous to labor she had neuralgia, when I gave her strychnine four or five times, following it with hypodermic injections to control the violent neuralgia, which extended by quick, electric metastasis to other parts of the body, the extremities and bowels, causing agonizing gripings; of which, however, she got entirely well, and was well at the time of labor.

Another case I saw a few days ago of Dr. Todd's, who had several convulsions. Dr. Todd controlled them to a considerable extent by chloroform. My experience and those with whom I have had conversation is that chloroform has a more controlling effect *ante partem* than *post partem*. In this instance Dr. Todd delivered with forceps, and immediately all symptoms of a violent character ceased, and the patient had a good time getting up, and will get well without doubt. This patient laid unconscious for four, five or six hours, and the convulsions were apparently the only vital exhibition she gave. The application of the forceps seemed to bring her first to consciousness. My opinion is that the presence of the fœtus frequently with labor is the cause of puerperal convulsions proper, and no particular pathological conditions of the brain or spine is the cause. I mean, a certain pathological condition is not necessary to the production of these convulsions; but it is the condition and presence of the fœtus, or possibly the absence of the fœtus. I suppose every physician knows the expressed feelings of a patient immediately after delivery, as well as the expressed feelings of a patient during the latter weeks and days of pregnancy. Under the nervous, pertubating influences of pregnancy and removal of the fœtus it is not wonderful that convulsions may be caused. It seems to me that the profession sometimes look a little too deep for the causes. Where patients are having convulsions *ante partem*, delivery is the course to be pursued, as that course almost universally brings relief.

Dr. V. Kersey, of Richmond:

One point I desire to call attention to. My own observation would lead me to suppose that we had better not always look to the same point for the cause of puerperal convulsions. I think I have seen puerperal convulsions caused by an offending meal taken in that particular condition of the nervous system that I think often obtains towards the termination of pregnancy. And I think I have seen them produced by the condition of the bowels at that time. I think I have seen them produced by a condition of the brain, a serious condition demanding the most active anti-phlogistic treatment. I think I have seen them produced when I could not tell what produced them. I do not think there is any settled constant cause for this sort of trouble. You may treat a case with almost anything; treat it in conformity with the indications, and the next month or year you see another case, and if you conclude to plant yourself upon the previous treatment, and adhere to it without observation, I think you will be apt to be a poor practitioner, and not administer

Digitized by Google

to the wants of your patient more than once in six or eight times. I believe we have to look well in puerperal convulsions to the causes that gave rise to them, and if you can not satisfactorily make out the local cause for the getting up of this involuntary movement of the muscular system, if you take it for granted that they are peurperal convulsions, and use all the remedies we have proposed, I should think the patient would be quite as well off if you were at home.

Dr. F. S. Newcomer, of Indianapolis:

I believe a majority, if not all of these cases of peurperal convulsions are the result of poison. I know that is not generally considered to be the case, but my experience has led me to that conclusion. I think the profession, as a general thing, neglect females before delivery; and since the first case I had, wherever practicable, I inquire of the husband, and have him see for himself, and report to me the condition of the kidneys, or if the extremities are swollen, and if there is any indication of there being anything wrong, and if I am to have charge of the case, I always make an excuse to go and see her. I am satisfied that under the same circumstances probably the same results would occur, and that by paying attention to the discharge by the kidneys during the latter stages of pregnancy, patients have been saved from a recurrence of convulsions. I am satisfied that this matter has been neglected. It is our duty to see to these cases and to see to the condition of the secretions, and I think if that is attended to, and the swelling of the extremities watched, you can not have a case of puerperal convulsions. I have my experience and the experience of others to prove that this may be the foundation of some truth. We should pay some attention to the bowels and the kidneys, and be satisfied that the liver is acting properly.

Dr. T. B. Harvey, of Indianapolis:

The subject of puerperal convulsions is one of great interest, and their pathology is not as well understood as it might be. I think, as was remarked by Dr. Kersey, it is impossible for us to lay down one general course for their appearance. We have, as was remarked, certainly a great many causes, such as an overloaded condition of the bowels, the stomach, etc., and many causes might be laid down as eccentric, requiring appropriate treatment for each individual case. Now I have been as strong a believer in the views advanced by Braun and Frerichs upon the subject of poisoning for eccentric causes as any other man, but recently I have been inclined to doubt the truthfulness of that pathology. Now it will be recollected that they lay down as a cause of Bright's disease of the kidneys, a pressure of the uterus, and this pressure upon the kidneys as a primary cause of the pathological condition which tends to bring about these puerperal convulsions. Now as an objection to this view we have a great many cases of pregnancy, in perhaps just this class of subjects which

Digitized by Google

they give us to understand are liable to it, where there is a great pressure upon the kidneys, on account of the tension of the abdominal muscles, and a great many of them do not have Bright's disease of the kidneys. The foundation of puerperal convulsions may be traced to some one of the profound changes made upon females by pregnancy. We should perhaps look more to the nutriment of the female in pregnancy, more to the digestion, and to the general condition of the system, than to disease of the kidneys. Now I think where the patient has albumenuria that the blood depreciates in quality, on account of the want of proper nourishment. It is the duty of the physician to look carefully into the causes. I think the number of plethoric females are few as compared with the number of patients in an anemic condition.

Dr. R. N. Todd, of Indianapolis:

I differ with Dr. Harvey as to the condition of pregnant females. You are going back upon the record when you assert that the anemic condition should be the general result of pregnancy. The opposite is my observation. Instead of the anemia we have plethora, and does it not result from a rich condition of the blood? By a provision of nature, in this important act of reproduction a pregnant woman is provided with blood richly charged, which I regard as the highest development of the physiological state. And I am sorry to see a certain class of men in our profession getting a holy horror of blood letting. Until I learn better I will not forsake past experience, and condemn blood letting, because I believe it is one of the most efficient means in the hands of a discriminating physician. Take a healthy, full-blooded woman, when labor comes on with a determination of blood to the head, pulse strong, extremities hot, a continual pressure of venous blood on the brain, and I would unhesitatingly open a vein and let the blood run freely. On the other hand weak patients require chloroform, and it should be used carefully. I would treat one class with blood letting, and others with chloroform, and none of them indiscriminately by opiates.

Dr. J. A. Comingor, of Indianapolis:

The whole trouble lies at the foundation of alimentation. No case of convulsions can occur possibly where the system is at its full standard of nutrition. I do not think Dr. Todd or any other gentleman can point out to me a single case where convulsions was the result of over-nutrition. At least that has been my observation. I have studied this subject closely at times, and some years ago a number of cases of this character came under my observation. Throughout pregnancy there are a great many circumstances giving rise to a great deal of disturbance of the general system, and a great wear and tear of the nervous system. Those conditions which arise at the close of pregnancy are the result of diminished alimentation. If gentlemen want to prevent the occurrence of convulsions, they must

Digitized by Google

instruct their patients from the beginning, as has been suggested by Dr. Newcomer, and increase the strength of their patients. In that way ninety-nine out of one hundred cases of puerperal convulsions may be avoided. Some gentlemen think they arise from one cause and some another. I do not think these opinions are well founded. They are disposed to look to too many causes to give rise to the same condition. I do not believe that any case of puerperal convulsions occur from a plethoric state of the system. Believing that, I shall never resort to the blood-letting process to remove them. It cannot do any good whatever under these circumstances. If it is diminished vitality which gives rise to this condition, as a matter of course you cannot correct that condition by abstracting blood and reducing the patient still lower. If I were going to treat a case of that kind, I should use controlling remedies to act upon the kidneys and the spine, and at the same time attempt to build up the physical powers of the patient; and if I succeed, I am as certain to prevent her having puerperal convulsions as she goes through her period. I think it much more necessary to build up a constitution than to tear it down. Where do you see any person whose health is at its full standard having any such thing as convulsions? In the treatment of cases it is much more necessary to look to alimentation than the introduction of nauseous medicines. I have little faith, as a rule, in the curative powers of remedies. I have faith in them as controlling agents—to control the organization of the nervous system until alimentation can be introduced, so as to correct the organic derangement going on.

Dr. J. J. Wright, of Indianapolis:

After all I do not think there is much difference between the gentlemen. While one may favor blood-letting, and another supplies the place of medicine by nutrition, I think there is full latitude for each to use the controlling agents he may prefer. But it strikes me that more importance should be attached to the suggestion made in relation to that sort of attention which should be paid to the pregnant female in our charge prior to the period of delivery.

Dr. N. D. Gadsby, of Vernon:

I will simply relate the treatment of a case of *post partem* puerperal convulsions. For reasons of my own I gave bromide of potassium in about 20 grain doses, which seemed to modify the convulsions but did not control them. I then began to search for the causes, and found among other things a relaxed condition of the uterus. Upon further search I found a clot, which I removed. During the removal of that the presence of my hand in the uterus seemed to excite to some extent convulsive action. The convulsions continued, however, after the uterus contracted and the bromide of potassium not seeming to control them. Having in previous cases used morphine alone without benefit, I concluded in that instance to combine

Digitized by Google

large doses of ipecac with morphine. I did so, and immediately controlled the convulsions; and by repeating the doses every three or four hours, increasing the length of time, they did not return, and the case made a good recovery.

Dr. L. Williams, of Marion:

I had a case subject to epilepsy previous to marriage. After marriage the epileptic fits ceased. In her confinement, at the moment of the expulsion of the head of the child, she took a terrible convulsion, and remained unconscious for several hours. The child was delivered, however, and all was well enough. She was again to be confined, and as I was fearful the convulsions might return I concluded to prepare myself with chloroform, which I did. The woman seemed depressed, very nervous, and I have no doubt would have gone into another convulsion at the same crisis if it had not been for the administration of chloroform. But the child was delivered without convulsions.

Dr. L. D. Waterman, of Indianapolis:

I do not believe the use of the lancet is ever justifiable except where convulsions occur during the continuance or presence of the pains, where the efforts of the mother produce such determination of blood to the head as to render mechanical relief absolutely necessary.

Dr. Todd (interrupting):

Do you believe a case of that kind ever occurs?

Dr. Waterman:

I believe they are very rare. In that case I believe blood-letting justifiable. My reasons for the position I take with regard to *post partum* convulsions is based upon this belief: that the condition of a woman at labor is essentially one of anemia. My reasons for believing so are these: The presence of disease in every one is an indication, more or less, of deficiency in the full standard of vitality. When a woman arrives at the full period of pregnancy, having sustained the demands of the growing fœtus nine months, although there may be a plethoric appearance, yet in the essential elements which make normal blood there is a deficiency, and that deficiency is essentially anemia. There is not in the entire system of the woman as much good, red blood as there should be in a woman who is not pregnant in a good ordinary condition of health; and the reason is that the vital force of the system is taxed for the development of the child. And under the demands of civilized life but few women come to the beginning of pregnancy in a strong, healthy condition. I am borne out in this opinion by the effects of blood-letting on animals. Where bleeding is continued to a great extent convulsions result; and the necessary hemorrhage attending

Digitized by Google

labor precipitates convulsions. And if in addition to that hemorrhage, although the blood vessels are apparently full of watery blood—you remove still more of that blood, to my mind you simply aggravate the condition of the woman. You may for a moment interfere with the paroxysms, but finally, unless the recuperative powers of your patient are good, you aggravate her condition. I heartily approve of the opinions of Dr. Comingor and others to encourage the vital powers up to the full time of pregnancy. It is important that you have a good, healthy, well-nourished system.

Dr. J. Moffett, of Rushville:

Chloroform is a popular remedy in the treatment of puerperal convulsions. Now how does it act? If we know anything at all about its action it is by the introduction of carbon into the blood that the intellectual portion of the brain, or that portion of the brain which gives us convulsions, becomes benumbed; and hence we can cut as much as we please and the mind has no knowledge of it. Now the question comes up, How do the convulsions cease by the use of chloroform? By the accumulation of carbon in the brain it benumbs that region, and we produce a complete cyanosis. That is all we do with chloroform. Therefore for myself I would use chloroform with great caution in such cases.

Dr. W. T. Harvey:

I have learned something since this discussion came up, and amongst other things that there is very little known in regard to the prime cause of puerperal convulsions. And in regard to chloroform, it seems in all cases I have seen, it was productive of manifest mischief.

Digitized by Google

Digitized by Google

TRANSACTIONS

OF THE

INDIANA STATE MEDICAL SOCIETY

AT ITS

NINETEENTH ANNUAL SESSION.

INDIANAPOLIS, TUESDAY, May 18, 1869.

The Indiana State Medical Society met in the Senate Chamber, in the State Capitol, at 2 o'clock P. M., and was called to order by the President of the Society, NATHANIEL FIELD, M. D., of Jeffersonville, who said:

Gentlemen of the Indiana State Medical Society:—I have to thank you for the honor you have conferred upon me in calling me to preside over your deliberations. I doubt my ability to perform the duties of the position to my own satisfaction, and it will give me pleasure to have your hearty co-operation and assistance in applying parliamentary rules to the points of order that may arise in the progress of our proceedings. I trust our coming together will be productive

Digitized by Google

of much good to our mutual interests, and redound to the honor and prosperity of our profession. And I furthermore hope that our proceedings will be characterized by that harmony and courtesy becoming a profession distinguished for its intelligence and its dignity.

The President announced the next thing in the order of business to be the calling of the roll by the Secretary.

On motion, the Society took a recess of fifteen minutes in order to give the Secretary a better opportunity to obtain a perfect list of the names of permanent members present, and to allow delegates to enroll their names.

The following permanent members were present, and paid their dues:

NAME AND RESIDENCE.	NAME AND RESIDENCE.
Drs. W. T. S. Connett, Madison.	Drs. J. H. McIntyre, Richmond.
J. W. Martin, Lebanon.	J. H. Lane, Northfield.
M. H. Bonell, Lebanon.	F. J. Van Voorhis, Stockw'll
J. V. Hoss, Normundy.	J. K. Mavity, Kokomo.
N. H. Canaday, Knightstown.	J. E. Lyon, Huntington.
M. L. Martin, Middlefork.	J. S. Athon, Indianapolis.
N. P. Howard, Greenfield.	W. J. Elstun, Indianapolis.
D. Clark, Richmond.	S. H. Charlton, Seymour.
F.J.C.Rawlings,ElizabethC'ty.	F. W. Beard, Harrodsburg.
W. Allen, West Newton.	J. R. Weist, Richmond.
W. B. Lyons, Huntington.	S. C. Thomas, Milroy.
H. V. Passage, Peru.	A. C. Dillon, Knightstown.
Jno. Lewis, Ogden.	M. Sexton, Rushville.
J. H. Stewart, Spiceland.	Jno. Arnold, Rushville.
J. J. Wright, Indianapolis.	F.S.Newcomer, Indianapolis
Wm. Scott, Kokomo.	C. N. Blount, Tipton.
L. Kern, Alto.	M.V. B. Newcomer, Tipton.
N. Field, Jeffersonville.	I. Mendenhall, Greencastle.
A. J. McLeod, Burnsville.	W. Lockhart, Danville.
A. L. Underwood, St. Paul.	W. G. McFadden, London.
W. F. Harvey, Plainfield.	T. M. Stevens, Indianapolis.
R. N. Todd, Indianapolis.	P. W. Paine, Franklin.
A. M. Vickry, Tipton.	T. B. Harvey, Indianapolis.
J. T. Jones, Franklin.	R. A. Williamson, Lebanon.
Theo. Parvin, Indianapolis.	J. M. Wishard, Greenwood.
W. P. Parr, Indianapolis.	H.D.Reasoner, New Cumbl'd
R. A. Curran, Huntington.	N. Mendenhall, Thorntown.
J. Cochrane, Spiceland.	W. Wands, Indianapolis.
I. N. Parr, Zionsville.	N. D. Gadsby, Vernon.
J. I. Rooker, Castleton.	Jas. Thompson, Harrison, O.
Jno. Moffett, Rushville.	J. M. Kitchen, Indianapolis.
D. Morgan, Evansville.	C. E. Wright, Indianapolis.
W. H. Wishard, Southport.	J. A. Comingor, Indianap'ls

Digitized by Google

The following gentlemen sent their annual assessment for 1869 to the Secretary:

NAME AND RESIDENCE.	NAME AND RESIDENCE.
Drs. Henry Charles, Fairmount.	Drs. T. J. Adams, North Salem.
Jno. E. Markle, Parkland.	Wm. Messner. Rainesville.
Wm. Freeman, Pennville.	T. B. Campbell, Marshfield.
L. Cory, Warren.	A. M. Porter, State Line.
T. R. Noble, Greenwood.	A. G. Porter, State Line.
R. G. Graydon, Southport.	Justin Ross, Williamsport.
L. P. Hess, Marion.	L. D. Lyons, Attica.
J. S. Shively, Marion.	A. Bigelow, Attica.
Jno. Rea, New Castle.	C. V. Jones, Covington.
C. Richmond, Kokomo.	C. D. Watson, Covington.
J. A. Nesbit, Castleton.	Joseph Stevenson, Pendleton
F. S. Boyd, Dublin.	H. D. Wood, Angola.
J. M. Bell, Dublin.	Thos. Chesnut, Lafayette.
J. A. Stillwell, Brownstown.	Jas. Wilson, Lafayette.
S. B. Harriman, Richmond.	John Simison, Romney.
N. L. Wickersham, Anderson.	—— Crouse, Dayton.
D. H. Crouse, Dayton.	—— Strother, Dayton.
J. W. Gordon, Indianapolis.	Benj. F. Ingersoll, Lafayette.
W. R. Winton, Wabash.	Wm. F. Cady, Lafayette.
R. Q. Wilson, Kokomo.	G. F. Beasley, Lafayette.
I. M. Darnell, Kokomo.	—— Glick, Lafayette.
Wm. Hoadley, Danville.	W. T. Cleland, Kewana.
B. Bartholomew, Danville.	Geo. Sutton, Aurora.
I. N. Craig, Castleton.	Dearborn Co. Med. Soc., Aurora.
B. Ward, Indianapolis.	Dearborn Co. Med. Soc., Aurora.
S. W. Purviance, Crawfordsv'e	Dearborn Co. Med. Soc., Aurora.
J. M. Shover, South Bend.	Dearborn Co. Med. Soc., Aurora.
J. R. Brown, South Bend.	Dearborn Co. Med. Soc., Aurora.
S. Lanning, South Bend.	S. S. Horne, Jonesboro.
G. M. Darrach, Napoleon.	A. D. Kimball, Zenia.
A. C. Irwin, Jalapa.	C. S. Arthur, Pennville.
Chas. F. Mayer, Ft. Wayne.	R. C. Bond, Aurora.
W. Q. Insley, Terre Haute.	H. C. Vincent, Guilford.
Joseph Jones, Attica.	A. B. Haines, Aurora.
John J. Thompson, Sullivan.	Jno. Sloan, New Albany.
Jas. R. Hinkle, Sullivan.	J. M. Ireland, Francisco.
S. M. Linton, Columbus.	

The Annual Assessment ($2) for the year 1868 was received from the following gentlemen:

NAME AND RESIDENCE.	NAME AND RESIDENCE.
Drs. S. D. Day, Shelbyville.	Drs. Jas. Thompson, Harrison, O.
M. H. Harding, Lawrenceb'g.	W. G. McFaddin, London.

Digitized by Google

N MED
LIBRARY

The President announced reports from officers to be in order.

The Secretary offered the following

REPORT:

Your Secretary would respectfully report that he has received, since the publication of the transactions for 1868, two dollars from each of the following:

Dr. I. B. Harriman, Richmond; W. P. Waring, Richmond; Dr. J. S. Bobbs, Indianapolis; Dr. C. S. Arthur, Pennville; Dr. W. A. Pugh, Rushville; Dr. I. B. Washburn, Star City; Dr. L. P. Hess, Marion; Dr. C. N. Blount, Tipton. Also seventy-five cents for extra copy from F. Buckland.

Total	$16 75
August 24, 1868, paid Dr. W. B. Lyons, Treasurer	$ 6 00
May 18, 1868, paid Dr. W. B. Lyons, Treasurer	10 75
Total	$16 75

G. V. WOOLEN, *Secretary.*

Which was received.

The Treasurer also submitted the following

REPORT:

W. B. Lyons, Treasurer, Indiana State Medical Society, in account with said Society.

				Dr.
1868.	May 19.	Cash on settlement		$168 27
"	May 20.	" Dr. Waterman		200 00
"	June 30.	" Dr. Waterman		43 58
"	Aug. 24.	" Dr. Woolen		6 00
1869.	May 18.	" Dr. Woolen		10 75
Cr.				
1868.	May 21.	Paid J. R. Weist	$100 00	
"	May 35.	" A. J. Dougherty	20 00	
"	June 23.	" B. F. Foster	8 00	
"	Aug. 24.	" J. M. & F. J. Meikel	256 80	
"	Sept. 9.	" Bill for Stationery	9 53	
1869.	May 18.	" Dr. Woolen, Postage	6 92	
				$401 00
		Balance on hand on settlement, May 18, 1869		$27 35

Which was referred to the Committee on Finance.

Digitized by Google

STANDING COMMITTEES.

Reports from standing committees were then called. The Committee on Publication presented the following

REPORT:

Your Committee on Publication have published since the last meeting five hundred copies of Transactions of the Society for the year 1868, at the cost of $256 80, one copy of which has been sent to each member of the Society who has paid his dues; amounting to one hundred and seventy-three copies in all. A great difficulty was encountered in securing the delivery of the Transactions at the time of distribution, and since, owing to some defect in the post office management, so that as many as four copies were forwarded in some instances.

Your Committee recommend that only half the number of copies of Transactions be published this year, unless a more general want seems to be manifested among the membership.

G. V. WOOLEN, *Chairman.*

Dr. J. K. Bigelow, Chairman of the Committee on Arrangements, reported verbally that all that Committee had done was to secure the use of the Senate Chamber for the meetings of the Society, with the understanding that the hall of the House of Representatives could be had if necessary.

MEMBERS DISMISSED.

The following name has been stricken from the rolls of the Society, in accordance with the requirements of Section VI of the By-Laws:

NAME.	RESIDENCE.	SOCIETY.
Alvin Carley.	Rushville.....	Rush Medical.

AMENDMENT TO CONSTITUTION.

There being gentlemen present who came from districts where there were no county societies, and who wanted to become members of the State Society, it was

Digitized by Google

suggested, as recently recommended by the American Medical Association, that a well-qualified committee be appointed to examine all applicants for membership.

Dr. L. D. Waterman then offered the following resolution, which was adopted:

Resolved, That a committee of five members be appointed by the President, who shall report as soon as possible such amendment to the Constitution and By-Laws as may be necessary, to enable physicians to become members of the State Society without becoming delegates of a county society.

The President then appointed Drs. Waterman, Kersey, Mears, Moffett and Parvin, as said Committee.

Dr. Waterman:

Last year we passed a resolution, to be found on page 160 of the Transactions. It seems that is a misprint, as the original mover of this resolution states, and for that reason I offer the following as a correction:

Resolved, That all delegates from local medical societies, who attend a meeting of this Society, shall become thereby permanent members of this Society.

Adopted.

THE TREASURER'S ACCOUNTS.

The Secretary read the following report from the Committee on Finance:

The Committee on Finance would beg leave to report that they have examined the Treasurer's accounts and find them correct, and recommend their approval.

T. B. HARVEY, *Chairman.*

DELEGATES.

Dr. L. Williams, from the Committee on Credentials, submitted the following

Digitized by Google

REPORT:

Your Committee on Credentials Report that they have examined the credentials of the following delegates who have reported and paid their dues, and recommend their admission:

NAME.	RESIDENCE.	SOCIETY.
Drs. H. J. Bogart	Charlottsville	Knightstown Union.
W. Hobbs	Carthage	Knightstown Union.
M. H. Harding	Lawrenceburg	Dearborn County.
C. B. Miller	Lawrenceburg	Dearborn County.
T. H. Sales	Dillsboro	Dearborn County.
W. H. Vance	New Corydon	Jay County.
D. C. Scull	Moscow	Rush Medical.
W. H. Arnold	Rushville	Rush Medical.
A. B. Casterline	Beech Grove	Rush Medical.
L. C. Miller	Alto	Howard County.
Wm. Lomax	Marion	Grant County.
L. Williams	Marion	Grant County.
S. K. Hardy	Northfield	Boone County.
T. H. Harrison	Lebanon	Boone County.
R. Curran	Jeffersonville	Jeff. Acad. Med.
W. B. Fletcher	Indianapolis	Ind'polis Acad. Med.
W. W. Foley	Indianapolis	Ind'polis Acad. Med.
J. S. Bobbs	Indianapolis	Ind'polis Acad. Med.
G. W. Mears	Indianapolis	Ind'polis Acad. Med.
J. H. Woodburn	Indianapolis	Ind'polis Acad. Med.
L. D. Waterman	Indianapolis	Ind'polis Acad. Med.
J. B. Sparks	Knightstown	Knightstown Union.
Jno. Medaris	Monticello	White County.
G. V. Woolen	Indianapolis	City Hospital.
D. L. Field	Jeffersonville	Clarke County.

Which was concurred in.

SPECIAL COMMITTEES.

The President announced reports from special committees to be in order.

Dr. J. S. Bobbs, Chairman of the Special Committee on a memorial to the Legislature for a General Hospital, asked and obtained further time to make a report.

On motion, the report of that committee was made the special order for to-morrow at 11 o'clock A. M.

On motion, the names of the committee were called, and where absentees occurred they were filled by appointment, as follows:

Digitized by Google

1st Congressional District—Dr. Daniel Morgan, of Evansville, *vice* Dr. De Bruler.

3d Congressional District—Dr. W. H. Harding, of Lawrenceburgh, *vice* Dr. Sutton.

6th Congressional District—Dr. N. P. Howard, of Greenfield, *vice* Dr. W. R. Winton.

7th Congressional District—Dr. T. H. Lane, of Northfield, *vice* Dr. Cox.

10th Congressional District—Dr. W. B. Lyon, of Huntington, *vice* Dr. R. Winton.

QUALIFICATIONS OF MEMBERS.

Dr. L. D. Waterman, from the Special Committee on Amendments to the Constitution, recommended the adoption of the following resolution:

Resolved, That a standing committee of three members be appointed by the President to inquire as to all the qualifications of applicants for membership, and upon their favorable report to the Society, a vote of two-thirds of the members present shall be necessary for the election of each one thus recommended.

On motion, a rising vote was taken, which was unanimous.

The President appointed Drs. Parvin, Kersey and Lomax said committee.

On motion, gentlemen having voluntary papers were requested to report them to the Secretary by title.

Dr. V. Kersey:

I have a very short paper—"Why Doctors Disagree"—which I propose to present to this Society.

Dr. J. Moffett:

I have a paper entitled, "A Case of Dropsy, with Remarks."

Dr. J. I. Rooker:

Some two years ago I issued a circular with a desire to gather information concerning the pathological results arising from the presence of bullets and other foreign bodies in wounds remaining unextracted. I received some few replies, but they were so few it discouraged me.

Dr. L. D. Waterman:

I move that Dr. Rooker be requested to condense these papers and

Digitized by Google

present them to the Society next year, if in his judgment they are worthy.

Carried.

CERTIFICATES OF MEMBERSHIP.

Dr. V. Kersey:

I would suggest that it become the habit with the Indiana State Medical Society to furnish certificates of membership, stating their status in our Society, to such of its members as move into other States and make application therefor.

Dr. J. S. Bobbs:

I move that a committee of three be appointed to take the matter into consideration and report what they deem expedient.

Agreed to.

The President appointed Drs. Kersey, Bobbs and Mears the committee.

THE ANNUAL ASSESSMENT.

Dr. Thos. B. Harvey, Chairman of the Committee on Finance, made a verbal report, fixing the assessment on each member for this year at two dollars.

Dr. L. D. Waterman:

Moved the assessment be reduced to one dollar. I believe a larger fund will be raised by reducing the assessment to one dollar. Members knowing our Transactions cost us only about seventy-five cents would not pay two dollars for them, but they would pay one dollar; and if our Secretary were instructed to so inform local Societies, we would get more money and secure a larger circulation for our Transactions.

Drs. Kersey, Passage, Harding and Todd supported, and Drs. Harvey, Curran and Woodburn opposed.

The amendment was agreed to.

HOSPITAL DELEGATES.

Dr. L. D. Waterman moved to amend Article III of the Constitution by adding the following section:

Digitized by Google

"Every General Hospital in this State shall be entitled to send one delegate to this Society."

On motion by Dr. Elstun, the Hospital for the Insane and the Soldiers' Home were included.

Adopted unanimously.

Dr. T. Parvin, from the Committee of Censors, recommended Dr. N. D. Gadsby, of Vernon, and Drs. T. B. Noble and J. M. Wishard, of Greenwood, as members of this Society.

Concurred in.

On motion, it was

Ordered, That when we adjourn it be till 7½ o'clock, to hear the inaugural address of the President.

Dr. Dougan Clark, by request of Dr. Kersey, read the latter gentleman's paper, entitled, "Why Doctors Disagree," which, after remarks by Dr. Moffett, was referred to the Committee on Publication.

The President announced Drs. Kersey, Lyons, Todd, Harding and M. H. Bonnell, Committee on Nominations.

The Society adjourned until 7½ P. M.

EVENING SESSION.

The Society met at 8 o'clock, Dr. R. N. Todd, Vice-President, in the chair.

The President, Dr. Field, read his annual address, the subject being, "The Troubles and Responsibilities of the Medical Profession."

The subject of the address was taken up and commented upon by Drs. Bobbs, Kersey, Hobbs, Passage, Harding, Morgan, Bigelow, Woodburn and Moffett in a very interesting and argumentative manner.

Dr. Field also participated in the debate, expressing his views more fully in relation to some of the points in the address.

Digitized by Google

The motion to refer the address to the committee on publication was then agreed to.

The Secretary announced a paper for to-morrow by Dr. W. J. Elstun; subject, "The Digestive Assimilation of Medicines."

And then the Society adjourned to meet at 8½ o'clock A. M. to-morrow, in the Hall of the House of Representatives.

Digitized by Google

SECOND DAY.

WEDNESDAY, May 19, 1869.

The Society met in the Hall of the House of Representatives pursuant to adjournment, and was called to order by the President, Dr. Field, at 9 o'clock A. M.

The President announced the following Standing Committees:

On Prize Essays—Drs. Bobbs, Curran, of Huntington, and T. B. Harvey.

On Ethics—Drs. Curran, of Jeffersonville, Morgan, Moffett, Rooker and Weist.

On Arrangements—Drs. J. J. Wright, Todd, Chas. E. Wright, Avery and Gaston, all of Indianapolis.

On Finance—Drs. Athon, Oliver, Harding, Hobbs, and Pugh.

On Publication—Drs. Waterman, W. F. Harvey, Woodburn, and the Secretary and Treasurer of the Society.

REPORTS AT THE NEXT MEETING.

The President appointed the following gentlemen to report at the next meeting:

Dr J. S. Bobbs, of Indianapolis, on Diseases of the Prostate Gland.

Dr. J. H. Woodburn, of Indianapolis, on the Symptoms and Treatment of Incipient Insanity.

Dr. D. Morgan, of Evansville, on Resections.

Dr. G. V. Woolen, of Indianapolis, on Syphilis.

Dr. R. Curran, of Jeffersonville, on any subject he may select.

Dr. W. H. Wishard, of Southport, on the Best Treatment of Scarlatina.

Digitized by Google

Dr. J. A. Comingor, of Indianapolis, on the Pathognomonic Signs of Nephritis.

Dr. R. A. Curran, of Huntington, on any subject he may choose.

Dr. T. Parvin, of Indianapolis, on Medical Education.

Dr. J. S. Athon, of Indianapolis, on Ovarian Diseases.

Dr. G. W. Mears, of Indianapolis, on the Most Effective Remedies for Arresting Uterine Hemorrhage.

Dr. W. Lomax, of Marion, on the Auscultatory Signs of Valvular and Ventricular Diseases of the Heart.

Dr. L. M. Martin, of Clinton county, to take his choice of subject.

Dr. H. V. Passage, of Peru, on the Influence of Malaria in the Production of Diseases.

Dr. P. W. Payne, of Franklin, on Intestinal Digestion.

Dr. W. T. S. Cornet, of Madison, on the Recent Improvements in Medicine.

Dr. M. Sexton, of Rushville, on Tetanus.

Dr. F. J. Vanvorhis, of Stockwell, on Mental Influence in Disease.

Dr. J. Moffett then read a paper entitled "A Case of Dropsy, with Remarks," which, after discussion, was referred to the Publishing Committee.

DURATION OF TERM OF OFFICE.

Dr. L. D. Waterman introduced the following resolutions, which were adopted:

Resolved, That hereafter the officers of this Society shall hold their official positions until the Transactions are issued for each year.

Resolved, That the Secretary be instructed to issue certificates to any members of this Society in good standing wishing to attend the meetings of other State Medical Societies as delegates.

Dr. Elstun's paper on the Digestive Assimilation of Medicines was then read by Dr. Bigelow, which, after discussion, was referred to the Committee on Publication.

A STATE HOSPITAL.

The President announced the special order for this hour to be the report of the Committee on Hospitals.

Dr. J. S. Bobbs, Chairman of the Committee of one from each Congressional District on the subject of a Memorial to the State Legislature for a General Hospital, stated

Digitized by Google

that he had addressed circulars to the different members of the Committee, and received responses from only about half of them. Some did not fully concur, and some seemed to have misconceived the object of the resolution. In anticipation of what might be required of the Chairman a rough draft of a memorial to the Legislature was made; and as some gentlemen did not respond to the circular, I did not deem it expedient to go before the Legislature with an imperfect report from the Committee, therefore I took the responsibility of withholding it. The Committee desire that the memorial be read to the Society for your consideration:

To the General Assembly of the State of Indiana:

The undersigned, Chairman of a Committee appointed at a session of the State Medical Society of Indiana, in May, 1868, at the city of Indianapolis, to memoralize the General Assembly in behalf of the afflicted and disabled pauper citizens of the State who are laboring under diseases and disabilities susceptible of removal or amelioration, but are without the means of availing themselves of proper surgical or medical skill. While the laws provide for county asylums for the care and subsistence of those without means, and requiring medical treatment and judicious nursing, from various causes these institutions are wholly inadequate to the wants of this afflicted class, and it is believed no legislative provision can make them materially better without a change in the manner of attempting this end.

Any one having observed the county asylums must be satisfied that in a large majority of the counties in the State these institutions are a discredit to the people among whom they are tolerated, and are a gross burlesque on the necessities of a place intended for the rational and humane care of the afflicted. They are generally wholly unprovided with comfortable houses of adequate room to admit of any proper separation of the sexes, or classification of diseases; are without any of the numerous means and appliances essential to the proper treatment of a large majority of their inmates; are without nurses, skilled or unskilled, and their inmates are subsisted on the cheapest and coarsest food, and receive medical attention which in no wise contrasts with these surroundings. Our prisons are placed in our towns, subject to official and unofficial visitation, for the benefit of their inmates; our poor houses are generally stuck out of sight, and so far as practicable prevented from obtruding their unsightly corpse betwixt the wind and our nobility. Our easy virtue is satisfied that legal provision is made for the destitute poor

Digitized by Google

when afflicted, and that virtuous intent comprehends our whole duty in the premises.

The Committee do not recommend that provision be made by the State for all the afflicted poor, without reference to the nature of their diseases, many of which are of an acute character, and short duration would not admit of the subject's transfer to a State Institution for treatment. But the Committee would pray your Honorable Body to make some general provision for that large and most unfortunate class, who, from accident or chronic disease, are compelled to seek the shelter of some local charity, and there drag out a miserable and protracted existence, homeless and friendless, and where no efficient means to restore them to health and usefulness is practicable.

While the Committee are of the opinion that a State Institution, at some eligible point, could be provided and properly furnished, which would meet the requirements of this class of patients, without increasing the cost of their maintenance little if any beyond that required under existing arrangements, the amount of benefit that it would secure to those compelled to seek relief in this way would be incalculably greater.

But in whatever way your Honorable Body may judge it expedient to extend aid to these afflicted poor, we most earnestly pray that this public appeal in their behalf may receive your favorable consideration, and that in your wisdom you will provide some mode for their relief. And as in duty bound your petitioners will ever pray so.

J. S. Bobbs.

Dr. W. H. Wishard:

I move that this report be made the special order of the day for 3 o'clock P. M.

Carried.

REPORT ON ETHICS.

Dr. W. B. Lyons, from the Committee on Ethics, made the following report:

To the Indiana State Medical Society:

The Committee on Ethics beg leave to report that at the close of the last Annual Meeting the report of the preceding Committee on Ethics was handed to the present Committee in the words following, viz.: "The Committee on Ethics beg to submit the following report: It having been represented to your Committee that some of the county medical societies, through their officers, are in the habit of publishing their proceedings, including surgical operations, and other cures performed by certain of their members, in the weekly

Digitized by Google

papers of the county, thus presenting themselves to the public as having superior ability to perform such operations and effect such cures. Your Committee would therefore recommend that the practice referred to be discontinued as unjust to their brethren, and as controvening the entire spirit of the Code of Ethics."

The following hand-bill was also laid before your Committee, which it is deemed proper to read:

"As this individual professes to be a member of the American Medical Association, your Committee would recommend that the aforesaid bill be forwarded to the proper officer of the American Medical Association, with the request that this case be taken into consideration by them at their earliest convenience.

"All of which is respectfully submitted."

In regard to the hand-bill alluded to, being an advertisement of Dr. J. B. Buchtel, of Terre Haute, of an unprofessional and undignified character, your Committee have forwarded it to the Committee on Ethics of the American Medical Association, with the information that its author entered the Association from South Bend, Ind., on the recommendation of the Committee of Arrangements, at Chicago, in 1863.

Touching the matter of improper publications by the officers of county medical societies, your committee have had some intimations of such things; but nothing has been presented in a tangible shape, even after no inconsiderable inquiry. Everything of the kind that has been hinted to the Committee has seemed to be a matter that should be first dealt with by the county society, to which the offending members, if such there be, belonged, and then if no adequate action should be taken, let the affair be brought before the State Society on appeal.

Nothing further has been submitted to your Committee for its consideration.

Respectfully submitted.

JAS. F. HIBBERD,
W. B. LYONS,
GEO. W. MEARS, } *Com. on Ethics.*

Concurred in.

ELECTION OF OFFICERS.

Dr. Kersey, from the Committee on Nominations, submitted the following

REPORT:

Mr. President: Your Committee on Nominations would respectfully and unanimously report the following names:

Digitized by Google

For President—GEO. SUTTON, of Aurora.
For Vice President—W. P. AYERS, of Fort Wayne.
For Secretary—G. V. WOOLEN, of Indianapolis.
For Assistant Secretary—W. J. ELSTUN, of Indianapolis.
For Treasurer—W. B. LYONS, of Huntington.
For Librarian—H. F. BARNES, of Indianapolis.

CERTIFICATES OF MEMBERSHIP.

Dr. Kersey submitted the following

REPORT:

Your Committee on Certificates of Membership would submit the following:

It would, in our judgment, be right for the State Society to be in the habit of furnishing certificates of membership and standing to applicants, and especially to such as are about to remove out of the State.

Such applications shall be referred to the Committee on Ethics, who shall prepare a statement of the membership and standing of the applicant, which shall be signed by the President and Secretary.

Concurred in.

ADDRESS OF SUPERINTENDENT OF PUBLIC INSTRUCTION.

Prof. B. C. Hobbs, Superintendent of Public Instruction, being present, was invited and addressed the Society a few minutes on the subject of Medical Men, and the Common Schools, as follows:

"I should not have ventured to appear here with any expectation of interesting you on matters pertaining to the healing art. I have observed through life that professional men are apt to crystalize and turn all their energies in the direction of bread and butter. We ought to expect more of a physician than success in the healing art. He has a duty to perform to his country, to the church, and the State. He is a citizen, and is interested in the moral and political condition of the community.

"I hold the medical profession under stronger obligations to aid the cause of education than any other class of men; for their success in acquiring a knowledge of medical science was largely dependent on accurate scholastic attainments. They were largely, at one period of their lives, teachers, and understood the teacher's work.

Digitized by Google

"They are from necessity familiar with the natural sciences. They understand the red, blue and green lights of chemistry, and can with little trouble or expense give popular lectures, with appropriate experiments, to city, village or county schools, or make suitable suggestions to teachers that will give them success in inspiring their pupils with a desire to become acquainted with the natural sciences.

"In aiding the cause of education the physician will aid his own profession. Laws may be made to regulate practice, but the great regulator of the healing art is an intelligent discrimination between the true and false by the people.

"The healing art will rise to its proper standard, as the whole people can appreciate it. When the people can understand the difference between a quack and an educated physician, the profession will have its proper protection.

"Dr. Brewster tells some interesting stories in his work on Natural Magic, about the power obtained by the priests over the minds of the people by the concave mirror, in presenting images of devils and of angels in mid air. When the principles of natural philosophy were taught to the people religious superstition lost its power.

"A few years ago a young man in Parke county read the advertisement of Dr. Roback for fits. He was assured of a cure or his money would be returned. He sent ten dollars for the remedies, and failed to be healed. He requested the return of his money. He was told that in a short time the planets would be in a very favorable condition for observations, and if he would remit ten dollars more a sure remedy would be sent him.

"This is but a case of a thousand. Let philosophy and chemistry, and astronomy, anatomy and hygiene, be well taught in our schools, and the charm of superstition will be broken in the practice of medicine. The masses will then understand the proper interpretation of a Dutch-English Almanac, and the relations of the planets to the diseases of men."

Dr. Moffet, of Rushville:

I am not willing that the appropriate remarks of the Superintendent of Public Instruction shall pass by without a response from the Society. I feel the force of the remarks he made.

Dr. Wilson Hobbs, of Carthage:

Of all men none are more vitally interested in the progress of education than medical men. It seems to me that the reason why quacks and empiricism run so rampant through our land is because our people have not that knowledge by which to judge between that which is true and untrue. Let us go home determined to avail ourselves of every means by which we can encourage education and

Digitized by Google

general intelligence. It is our duty as patriotic and Christian men, and these are motives enough to impel every man of intelligence to do his duty in this respect.

Dr. Bobbs, of Indianapolis:

I move the following resolution:

Resolved, That the thanks of the Society are due and are freely tendered to Professor Hobbs for his address, and that his suggestion, in the manner in which physicians might aid the efforts of teachers in our common schools, on enlarging and diffusing a more general knowledge on scientific and philosophical subjects among the mass of the people, should receive the approval of the profession, and so far as practicable be acted upon by its members.

Adopted.

Prof. Hobbs:

Perhaps I ought to express my thanks to this body for the kind and complimentary way in which they have been pleased to receive my remarks. I made them, thinking that if I escaped censure it would be all I could ask.

INVITATION TO THE INSANE ASYLUM.

Dr. Todd presented the following invitation:

INDIANAPOLIS, May 19th, 1869.

The members of the State Medical Society are respectfully invited to visit the Indiana Hospital for the Insane at such time as may suit their convenience.

P. H. JAMESON, *Pres't Board Com'rs.*

The invitation was accepted and the Society's thanks returned for the same.

On motion, it was

Ordered, That the Society will visit the Insane Hospital at 3 o'clock this P. M.; and that Dr. Sexton's paper be read and discussed in the Hospital Chapel.

Then the Society took a recess till 1½ o'clock.

Digitized by Google

AFTERNOON SESSION.

The President called the Society to order at 2:20 o'clock P. M.

DELEGATES TO AMERICAN MEDICAL ASSOCIATION.

Dr. Waterman offered the following resolution, which was adopted:

Resolved, That the Secretary be instructed to issue certificates as delegates to all members in good standing who desire to attend the next meeting of the American Medical Association.

MEDICAL PUBLICATIONS.

Dr. Kersey offered the following preamble and resolution, which were adopted:

WHEREAS, Most of the drugs consumed by the people of our State are taken without medical advice, and without knowledge of the disease or means of cure. This heedless use of medicine is always hazardous, generally injurious, and sometimes directly destructive of life. The practice has grown into an evil of great magnitude, reaching almost every family in the land. Most proprietary medicines are used in this reckless way, and are advertised for the purpose of increasing their sale and consumption by the people. In view of these facts, be it

Resolved, That, in the judgment of this Society, the practice of advertising proprietary medicines is fit only for wholly mercenary publications; that it is essentially out of place and degrading for all periodicals designed to promote the public good, and above all for enlightened medical journals.

Dr. Waterman offered the following:

Resolved, That auxiliary societies may refer any papers they deem worthy of publication, to this Society for its consideration, and publication in the Transactions if approved.

The resolution was adopted.

BOARD OF STATE CHARITIES.

Dr. Weist presented the following:

Resolved, That a committee of three be appointed by the President, for the purpose of taking into consideration the propriety of petitioning the State Legislature to provide by law for the appointment

Digitized by Google

by the Governor of the State, of a "Board of State Charities," whose duty it shall be to investigate the whole system of the public charitable and correctional institutions of the State, and recommend such changes and additional provisions as they may deem necessary, in order to secure to the inmates of these institutions more efficient, humane and hygienic influence, than in many cases now obtain.

The resolution was adopted, and the President subsequently appointed Drs. Weist, Stuart and Scott said committee.

HALF-FARE TICKETS.

The Chairman of the Committee of Arrangements reported that they found, upon investigation, that a request made last year of the different railroads for half-fare tickets for members attending this Society had been met with a refusal, and they had not deemed it proper to repeat it again.

Several members indulged in some keen criticisms on the course pursued by the railroads towards the Society, having refused it favors which were granted to nearly all other organizations. Instances were given where professional services had been performed for companies without charge, in case of accidents, and favors in return had afterwards been refused.

WESTERN JOURNAL OF MEDICINE.

Dr. Lyons offered the following resolution, which was adopted:

Resolved, That this Society recommend the profession of the State to subscribe for and contribute papers to the *Western Journal of Medicine*.

A STATE HOSPITAL.

The President announced the special order for this hour to be the consideration of the report of the Standing Committee on a General Hospital.

Dr. Wishard offered the following:

Resolved, That the report of Dr. Bobbs, Chairman of the Committee on the Necessity and Utility of a State Hospital, be adopted as the memorial of the Indiana State Medical Society, and as such be pre-

Digitized by Google

sented to the General Assembly of Indiana at their next meeting by this Committee, and that every member of the profession be earnestly solicited to labor for the establishment of a State hospital at Indianapolis, separately or in conjunction with the present City Hospital.

After discussion by Drs. Wishard, Bobbs, Kersey, Curran and Woolen, who all endorsed the movement, the resolution was adopted.

INDIANA MEDICAL COLLEGE.

Dr. Woodburn offered the following:

Resolved, That this Society will give its influence and support to the Indiana Medical College, and requests the physicians of the State to co-operate in the enterprise to the extent of their ability.

The resolution was adopted.

Carriages were then announced to be in readiness, and the meeting adjourned, to meet at the Insane Asylum, for which place they immediately started.

AT THE HOSPITAL FOR THE INSANE.

Upon their arrival they were received in the chapel of the institution by the Superintendent, Dr. O. Evarts, and his assistants, Drs. Elstun and Hester.

The essay prepared by Dr. Sexton was read by Dr. T. B. Harvey, which, after discussion, was referred to the Committee on Publication.

Then the Society took a recess till 8 o'clock P. M., to meet in the Hall of the House of Representatives.

Drs. Evarts, Hester and Elstun then conducted the members through the institution, much to the interest of all, all testifying to the able and efficient manner in which the institution was managed.

Digitized by Google

EVENING SESSION.

President Field called the Society to order at 8 o'clock.

SESSION OF 1870.

On motion it was ordered that the Society will meet at 9 o'clock A. M., of the third Tuesday in May next, so that preliminary business may be attended to before the regular hour.

Dr. Wm. F. Harvey, of Plainfield:

If there is no business before the Society I would like to have the subject of Puerperal Convulsions discussed.

Upon invitation by the President the discussion was opened by him and participated in by several gentlemen of the Society.

THANKS TO THE PRESIDENT.

Dr. Lomax moved that the thanks of the Society be tendered to our worthy President for the able and efficient manner in which he has presided over the deliberations of this year's meeting.

Secretary Woolen put the question, which was agreed to unanimously.

President Field:

Gentlemen of the Indiana State Medical Society:

Allow me, before taking leave of the Chair, to express my grateful acknowledgments for the compliment just bestowed upon me. I am not conscious of having merited such a mark of respect, but if I have been so fortunate, in presiding over your deliberations, as to give you satisfaction, I am more than gratified. And before we part allow me to invoke upon the future deliberations of this Society that harmony and kindly feeling which has prevailed throughout this reunion. Our deliberations have been pleasant and instructive. Let it be the highest object and motive of every member of this Society to promote its usefulness and welfare; and especially let the junior members of the profession give their hearty co-operation in maintaining the Indiana State Medical Society. For we older members

Digitized by Google

must soon pass away, and the burden of upholding the dignity of the profession, and elevating that high tone of honorable feeling which should exist, will necessarily devolve upon you.

THANKS TO THE SECRETARIES.

Dr. Woodburn, of Indianapolis:

I move that the thanks of the Society be tendered to the Secretaries, Drs. Woolen and Elstun.

Agreed to.

Dr. Comingor—

The paper offered by Dr. Harvey has not been read. I move that it be read by title and referred to the Publishing Committee.

Which was agreed to.

The Secretary read the title of Dr. Harvey's paper, viz.:

"Two Cases of Albumenuria, with Remarks."

On motion the short-hand report of the discussion to-night was referred to the Publishing Committee.

On motion the Society adjourned to meet in the city of Indianapolis on the third Tuesday in May, 1870, at 9 o'clock A. M.

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

HC 312U M

2 CAL 321

Digitized by Google

Digitized by Google